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The British Way

With 19 Illustrations 51 Paintings

SIR EVELYN WRENCH

Our Search for British Paintings

With 4 Illustrations

FRANKLIN L. FISHER

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GILBERT GROSVENOR

Map of the British Isles

Forty-eight Pages of Illustrations in Color

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The British Way

Great Britain's Major Gifts to Freedom, Democratic Government, Science, and Society

By Sir Evelyn Wrench
Founder of the English-Speaking Union

THIS ARTICLE is an attempt to tell the story of Great Britain's contributions to Western civilization, not only in evolving parliamentary institutions but in other fields of human endeavor: literature, law, chemistry, physics, medicine, exploration, theater, agriculture, and sport. It is a tremendous theme.

A series of 48 historical paintings illustrates episodes and some of the chief actors in British history. The events and pictures by no means represent all that Britain has contributed; they have been selected by your Editor, Dr. Grosvenor, with the object of showing aspects of our civilization and culture which have become part of the American and Canadian heritage (pages 446 to 541).

I write in no spirit of jingoism but with the hope that the readers of the National Geographic Magazine, in the American and British Commonwealths, may derive inspiration from this review of some of the events which have helped to fashion our joint civilization.

Americans Draw on British Contributions

The American legislator, magistrate, and lawyer constantly draw on their British background.

When the American citizen takes his place in a railway train, he might give a passing thought to George Stephenson, the constructor of the first railroad.

When he is vaccinated by his physician, he can remember with gratitude the name of Edward Jenner, who overcame smallpox.

When he goes to hospital for surgical treatment, he can bless the name of Lister, the father of antiseptic methods.

When he sticks a postage stamp on his letter, he can recall the name of Rowland Hill, whose introduction of the postage stamp in 1840 changed the daily life of man.

When he enters a skyscraper, he can reflect that its erection was made possible, in part, by the discoveries of Henry Bessemer.

When he turns on the electric switch in his home, he should remember the pioneer work of Humphry Davy and Michael Faraday.

When he listens to the radio, he can recall the early experiments of Joseph J. Thomson.

If he plays a round of golf, a set of tennis, or a game of football or of soccer, he is linked up with pioneer British sportsmen.

When he sinks into his armchair at the end of a strenuous day's work and takes up a novel, he can bless the name of Samuel Richardson, whose *Pamela* was the first real novel; or if his book is a detective story, that of Conan Doyle, creator of Sherlock Holmes.

Even when he reads about the atom bomb, he should remember that Lord Rutherford first showed that radioactivity is an atomic phenomenon.

Tight Little Island

This is the story of an island less than the size of the State of Oregon, situated on the edge of Europe and yet in no sense merely European in its outlook. For some 350 years the islanders have looked across the ocean. One of the greatest moments in Britain's story

National Geographic Photographer Willard R. Culver

The Lacock Abbey Magna Carta Was on Exhibit in the Library of Congress

Lent to the United States by an Act of Parliament, this a. D. 1215 copy of the historic document was kept in Washington, D. C., for two years. It was returned to the British Museum's deputy keeper of manuscripts by Dr. Luther Evans (left), Librarian of Congress, at simple ceremonies in the rare book room, December 23, 1948. At the center of the picture is Chief Justice of the United States Fred M. Vinson and at the right Sir Oliver Shewell Franks, Ambassador from Great Britain (see page 456).

was when her people realized their oceanic destiny. Great Britain has become a stepping-stone between the Old and the New Worlds.

A realization of what our insular position means to us came home to me during World War I, when, flying over the English Channel, I looked down on a narrow strip of silver sea sparkling in the summer sunshine. How narrow the Strait of Dover was I had never realized so forcibly before. In the early days of flight, however, it provided an impassable barrier between Britain and Europe. We had much to be thankful for; that narrow "ditch" was our salvation. Since the Norman Conquest we had fought our foes on foreign soil.

On the debit side, perhaps, was the fact that isolation from Europe had been responsible for a too strong streak of conservatism and a tendency at times to be tardy in adopting the improved methods of our neighbors. On the other hand, this strip of water had contributed in so small degree to the development of a rugged individuality which had been the mainspring of Britain's genius through many centuries.

Our heritage has been drawn from many quarters. Our religious faith springs from the hills of Galilee; our architecture and philosophy have been fundamentally influenced by Greece; our laws have been based in part on the jurisprudence of the Roman Empire; the Crusades gave us new vistas of the world in which we live; the Renaissance reached us from the cities of Italy. Finally, the migra-

tion of between 50,000 and 100,000 Dutch refugees, who sought asylum in East Anglia and southeastern England from Spanish persecution in the Low Countries, played a great part in shaping our way of life in the reign of Elizabeth.

Evolution of Parliament

Incomparably the greatest gift of the English people to the civilized world has been that of parliamentary institutions.*

The origins of the jury are somewhat obscure, but certainly England has played a great part in its evolution, although it was introduced by the Normans. Under Norman law the jurors were investigators rather than judges of evidence. When William the Conqueror ordered the Domesday Book to be compiled (page 452), his commissioners checked the evidence of the witnesses they called with the aid of a "jury" of twelve reliable men in each district.

In the picture of the Roman Wall, with which the series opens (page 446), we can ponder on the extent to which our way of life has been influenced by Imperial Rome.

Every student of history should visit the Roman Wall, especially at Borcovicus, about halfway between Newcastle and Carlisle, where the marks of Roman chariot wheels can be seen on the pavements. It is a moving experience to look down from these battlements, as they curl up and down the hillside, and realize what a mighty barrier they presented to the wild men of the north.

The painting of Alfred represents one of the greatest of our rulers, who helped to forge the unity of our nation, repelled the Danish invader, realized the importance of sea power, stimulated interest in Latin culture, and made his capital a seat of learning (page 448).

Richard Coeur de Lion represents the Crusades, which quickened our interest in Eastern thought and gave new conceptions of chivalry to the barons and knights of the feudal age (page 455).

The story of Lady Godiva, who in the words of Tennyson "built herself an everlasting name," takes us into the region of history and legend. She was a benefactress of the church at the time of the Norman Conquest and symbolizes the ideal of self-sacrifice (page 450).

Arthurian Legend

In the shadowy realm where myth and history intermingle, the story of King Arthur and his Round Table has captured the imagination of poets and painters down the ages. English literature would certainly be immeasurably the poorer without the Arthurian legend.

As we wander through the Duchy of Cornwall, the neighboring counties, and the Welsh mountains, our holidays are much enriched by visits to the Arthurian shrines. In a materialistic world we rejoice that poets and seers—above all, Tennyson in the 19th century—have given us the vision of Galahad, the spiritual knight, and of his search for the Holy Grail, visible only to the pure in heart.

One of our earliest publications was a collection of ballads entitled *A Lytell Geste of Robyn Hode*. Robin Hood was a popular figure in the second half of the 12th century. He was a high-born youth who, so the story goes, was outlawed for killing one of the King's deer. The territory over which he roamed extended from Sherwood Forest in Nottinghamshire to the dales of Cumberland.

Around him he gathered a goodly company of archers whose example inspired the Englishmen of the day with a determination to become proficient in archery as a means of national defense. He has long been a national hero, and his bravery and chivalry endeared him to his countrymen. In a sense, we may regard him as an early example of the British sportsmen who stimulated in us the desire to excel in games (page 444).

Elizabethan Mariners

Various reasons have been given for the amazing transformation which took place in the national character between the reigns of Elizabeth and William and Mary. There was a grim and coarse side to life under the Tudors. Incredible Elizabeth was typical of her age, as changeable as quicksilver but very sagacious. She could swear like a trooper with her subjects; but she gave her country internal peace for 40 years, in which it made ready for the era of expansion overseas (page 466).

The Renaissance, the Reformation, the opportunity to study the Bible in English, the resounding victory over the Spaniards, all helped to give a new direction to the nation's thoughts. The islanders gratefully accepted their triumph over the Armada as an indication of divine intervention on their behalf.

Having turned their backs on Europe, the Elizabethans penetrated unknown seas from the Arctic to Cape Horn. Obsessed with the desire of finding a shorter route to the riches of the Orient, they performed prodigies of valor and endurance in searching for the Northwest Passage.

* See "Yanks at Westminster," by Capt. Leonard David Gammans, M.P., NATIONAL GEOGRAPHIC MAGAZINE, August, 1946.

© Gaumont Photo Union

In St. Paul's Cathedral the King and Queen Offer Thanks on Their Silver Wedding Anniversary, April 26, 1948

Photopress

Lord Rutherford Lectures on Transmutation of Elements, an Atom Bomb Principle, Before the Royal Institution, March, 1934

For these Friday evening assemblages all persons in the audience wear formal dress. An invitation to address the distinguished meeting is an accolade conferred only on outstanding scientists. The Institution was founded in 1799 by Count Rumford, Benjamin Thompson, who was born in Massachusetts.

National Geographic Photographer B. Anthony Stewart

Top-hatted, an Eton Boy Entertains Visitors at the June 4 Celebration

The headpiece is a part of a once inviolable tradition at this famous old school, where many of England's great have had their early training. Since September 1, 1948, the requirement no longer holds.

In our cavalcade, on pages 461, 468, and 498, are included scenes from the lives of John Cabot; Francis Drake, the first leader of an expedition to circumnavigate the world (Magellan died before he completed his voyage); and of James Cook, who, two centuries later, charted the waters of the St. Lawrence and won the vast Continent of Australia, at the Antipodes, as a heritage for the English-speaking peoples.*

It is true that England lagged behind the Portuguese, the Genoese, and other Latin peoples in seeking to penetrate the secrets of the unknown world. The city of Bristol, however, can certainly claim to have looked westward from an early date; a dozen years before the voyage of Columbus, John Jay's expedition set out from the Avon to discover "the island of Brazil." John Cabot came to Bristol because it would serve as a good starting point for his western venture.

Roger Bacon Influences Columbus

Roger Bacon, "the prince of medieval thought," was born in the year before Magna Carta; he may be regarded as the direct forebear of the explorers of the Renaissance. His *Opus Majus* treated "of the westward passage round the sphere to Asia."

Two hundred years later Cardinal Pierre d'Ailly printed extracts from Bacon's work in his *Ymago Mundi*. As Professor Williamson observes, Bacon's volume, more than any other single work, was "the authority that inspired the trans-Atlantic voyagers. Columbus, in reading and rereading his copy, and enriching it with scribbled marginalia, was deriving instruction from a great English intellect." †

If England was slow to follow up Cabot's discovery of North America, she made up for lost time a hundred years later and gave to the world a group of navigators who have never been surpassed in daring and seamanship. The map of the northern half of the Western Hemisphere reminds us of the names of some of them, such as Martin Frobisher, John Davis, William Baffin, and Henry Hud-

* See, in the NATIONAL GEOGRAPHIC MAGAZINE: "Columbus of the Pacific," by J. R. Hildebrand, January, 1927.

† *The Ocean in English History*, by James A. Williamson, p. 11. Clarendon Press, 1941.

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Lloyd's Paid for Loss of the Stratosphere Balloon *Explorer I*, July 28, 1934

The great London association of underwriters put up the policy for bids by its members; and 835 individual British subscribers took shares in the risk. Through Lloyd's, each underwriter paid the National Geographic Society an average of $32 when the gas bag, inflated with hydrogen, ripped and exploded; the flyers saved themselves by parachute jumps. On a subsequent flight by *Explorer II*, November 11, 1935, noninflammable helium was used and no insurance was necessary. Albert W. Stevens and Orvil A. Anderson made the record ascension to 72,395 feet (page 527). The flights were sponsored by the National Geographic Society and U. S. Army Air Corps. The earliest known life insurance policy was issued in England in 1583.

 National Geographic Photographer B. Anthony Stewart

King Arthur and His Knights May Have Sat Around This Round Table

For centuries the 18-foot board has hung in the Great Hall of Winchester Castle. It was mentioned in records of A. D. 1253. Around the rim are names of the legendary heroes, Lancelot du Lac, Galahad, and others.

son. Hudson, sailing under the Dutch flag, helped to establish New Netherland.

The adventurers of London and Plymouth were inspired by the writings of Richard Hakluyt, a promoter and recorder of the expansion of England beyond the seas. It is only during the last century that his great achievements have been appreciated at their true worth.

America owes a special debt to these empire builders and seamen, among whom were: Walter Raleigh, a promoter of Virginian settlement, although he never lived to set foot on its soil; Bartholomew Gosnold, George Weymouth, Martin Pring, Richard Grenville, and Christopher Jones of the *Mayflower*.

Among other promoters of colonization we think gratefully of Lord Southampton, Shakespeare's patron; Thomas West (Lord Delaware), who arrived at Jamestown in 1610, when the morale of the settlers was at a low ebb, and of whom Alexander Brown writes: "If any one man can be called the founder of Virginia . . . I believe it is this man."

We must list also Sir Ferdinando Gorges, "the father of English colonization in America"; William Bradford, Lord Baltimore and the other Calverts, Yorkshiremen; William Brewster and the Reverend John Robinson, the "beloved pastor of the Pilgrims," born in the adjoining county of Nottingham; John Cotton of Derby; Capt. John Smith and five of the Governors of Massachusetts, of Lincolnshire; the Reverend John White, "the patriarch of Dorchester" and the promoter of Massachusetts Bay. Indeed, there is not a county in England whose sons have not played a leading part in the epic story of the founding of English civilization in North America.

At the very moment when Puritanism was spreading throughout England and Scotland, at the beginning of the 17th century, our island became a colonizing power. Despite the fact that the first permanent English settlements on the North American Continent took place in the reign of insignificant James I, a firm believer in the divine right of kings, other powerful influences were fortunately at work.

England and Democratic Rule

The United States of America was founded in an era when liberal political ideas were circulating in England. How powerful they were becoming was soon to be demonstrated by the success of Cromwell and his Roundheads (page 476).

The first legislative assembly in the New World met at Jamestown in 1619, under the

British Information Services

On This Plate Penicillin Was Born

Sir Alexander Fleming noted the colony at the top with harmful bacteria degenerating around it. From its descendants came the miracle drug (page 534).

inspiration of a group of farseeing men, above all of Sir Edwin Sandys, who held views of religious tolerance far in advance of his age. These men of progressive outlook controlled the affairs of the Virginia Company, and, despite the subsequent opposition of the King, purposed to erect in the New World a free and popular State where the English colonists would have "no government . . . putt upon them but by their own consente."

Wherever the English colonists went, they based their institutions on those of the motherland. If we wish to measure our debt to these early founders of political liberty overseas, we have only to contrast the conditions in the English plantations with those that existed in the Spanish, Portuguese, or French colonies.

Heritage of English Literature

English literature is represented in the picture of Chaucer's Canterbury Pilgrims; of James I supervising the production of the Authorized Version of the Bible; of Shakespeare courting Anne Hathaway; of Milton, champion of the freedom of the press, dictating to his daughters (pages 459, 470, 479).

Other great figures include William Blackstone, author of the famous legal *Commentaries*, whose work had probably an even greater following in the American Colonies than in England; Charles Darwin, whose *Origin of Species* gave a new direction to man's thinking; Charles Dickens, who as the result of the appearance of the *Posthumous Papers of the Pickwick Club* became at the age of

Indians Hurried to Trade at Fort Charles, First Hudson's Bay Company Post on Ross

Over the elevator in the lobby of the Hudson's Bay Company store in Winnipeg [illegible] becomes of business in Canada

24 the most popular author of the day (pages 490, 520, 515).

To [illegible] accurate representation of all [illegible] English literature would require more space than is available. It is a stupendous theme and only a few can be named: John Bunyan, the tinker, who wrote *Pilgrim's Progress* in the reign of Charles II; John Evelyn and Samuel Pepys, who [illegible] take us behind the [illegible] James Boswell, the [illegible] the immortal Dr. Johnson, whose wit and words dominated the literary circles of the day; John Locke, the philosopher, whose treatises of government had probably more influence on American thought in the Revolutionary age than those of any other writer, with the possible exception of Tom Paine; Adam Smith, author of *The Wealth of Nations*; Thomas Carlyle, John Ruskin, and Herbert Spencer.

The list of eminent historians is a long one. From the days of the Venerable Bede (British monk who wrote the earliest history of England, A.D. 731) down to Edward Gibbon, it includes such writers as T. B. Macaulay, W. E. H. Lecky, and in our own times James Bryce, author of *The American Commonwealth*, H. A. L. Fisher, and G. M. Trevelyan.

There was an amazing output of poetry and prose in the early days of the industrial age, which output continued throughout the Victorian era (page 50).

Of the English Poets in *Bartlett's Quotations*, 1948 edition, Shakespeare, of course, leads all the list with 1,118 inches accorded to him. Many of [illegible] are uttered unconsciously in our everyday speech. The English-speaking person can scarcely read a novel or even a newspaper without encountering unintentional quotations—especially many phrases which we think are current slang.

It never occurred to an American high school boy to quote *Hamlet* until it came forth in the movies. Asked what he thought of it, he said, "Good stuff. I certainly didn't laugh myself to death, and the thing is full of [illegible]." [illegible] quoting Shakespeare in his verdict. ("Laugh myself to death" is verbatim from *The Tempest*.)

Some years ago a reporter was sitting in front of two teachers at [illegible] version of *The Taming of the Shrew*. [illegible] had the line, "It is a lusty wench." One teacher said to the other, "Isn't it a shame how the movies vulgarize even Shakespeare?"

After Shakespeare in the Bartlett quotation roll comes the poet that few read and everybody quotes—Milton, with 224 inches.

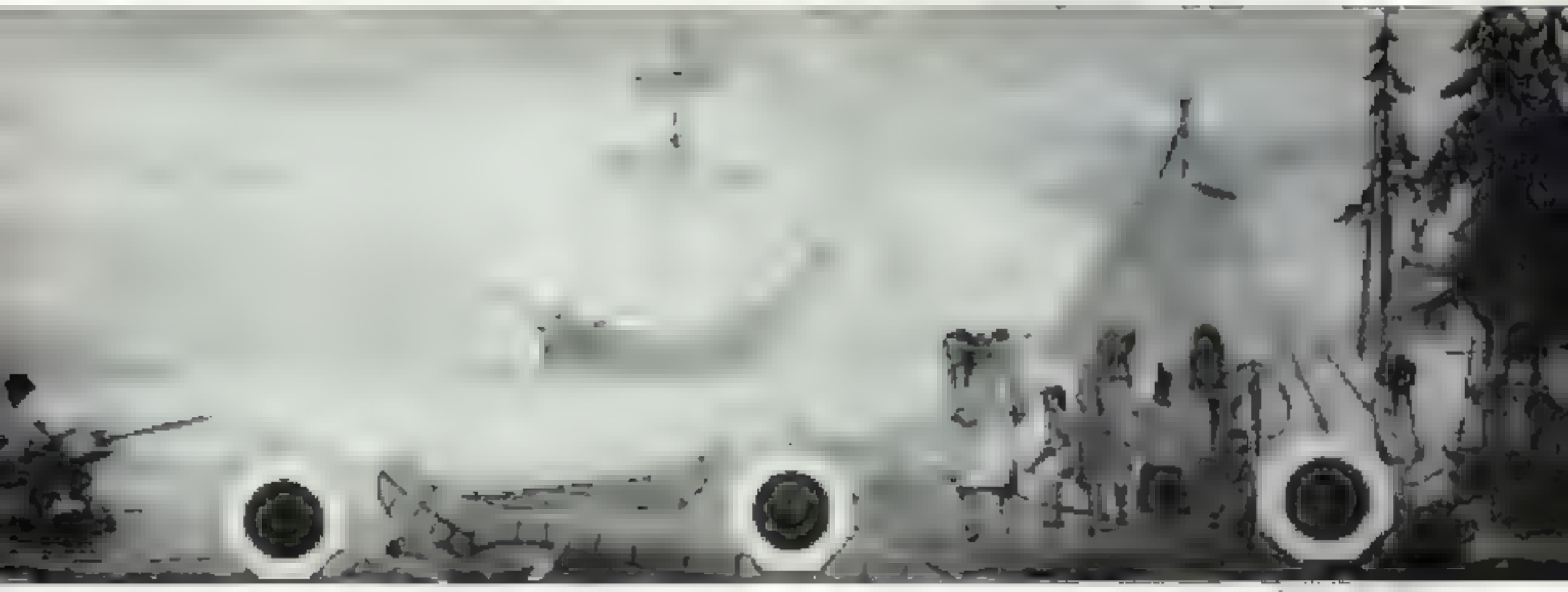
Then the score jumps to a modern—Rudyard Kipling, with 173 inches.

The following are next in image in the Bartlett listing:

Tennyson	[illegible]
Byron	[illegible]
Wordsworth	[illegible]
Browning	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Invention of the Novel

How many American visitors to London, I wonder, have ever penetrated into Salisbury



The Merchants Had Just Landed from the *Nonsuch*, and the Stockade Was Not Completed

Better roads had been brought over from England on [illegible] ketch standing offshore. Dates above the bottom of this picture are elsewhere spelled out in words.

Source of [illegible] fact, how many Londoners—to pay their tribute to the "fat little printer" who worked there, and whose invention of the novel was to intellectual life as epoch-making as the invention of railways to social life?

Samuel Richardson was a [illegible] boy, whose father, a London joiner, could not afford to give him a good education. Evidently, young Richardson planned his own line of study. He was devoted to female society and [illegible] degrees to have gathered an insight into the ways of the female heart.

In his fiftieth year he turned this knowledge to good account. From his printing press in Salisbury Square he [illegible] *Pamela, or Female Virtue Rewarded;* and the novel, as we know it, came into existence. Subsequently, *Clarissa Harlowe* and *History of Sir Charles Grandison* appeared. Soon Richardson was [illegible] a study of the human heart, "set in a frame of contemporary middle-class manners."

Soon there were emulators. Henry Fielding [illegible] to parody *Pamela* [illegible] female virtue [illegible] Richardson's announcement, *Joseph Andrews* appeared, an exemplar of masculine virtue. *Tom Jones*, Fielding's best-known book, was a better novel. It [illegible] studied as a model in college classes. Within a quarter of a century of the [illegible] of the English novel, such writers as Tobias Smollett, Laurence Sterne, [illegible] were making their special contributions to English fiction. Jane Austen, Sir Walter Scott, George Eliot, and other novelists set a new style for fiction.

Inventors Founded New Industries

In our series of paintings emphasis has been laid on British inventors and scientists. In [illegible] contribution to civilization. Without these men the rapid industrial expansion and scientific achievements of the United States would not have been possible.

"Near the end of the eighteenth century there appeared in England three inventions that ushered in a new industrial world and which have changed many of our social and political conceptions," writes Dexter S. Kimball, [illegible] of Engineering of Cornell University.

"These were Hargreaves' spinning jenny, Watt's steam engine, and Maudslay's all-metal screw-cutting lathe.

"Many inventions [illegible] were successful practically and were the forerunners of our modern era. Their character should be carefully noted.

"A tool maker who has been called [illegible] man of inferior skill to perform with their aid operations that without them would require a workman of superior skill.

"Almost anyone could spin with the Hargreaves machine. The Maudslay lathe made a similar advance in machine tools.

"The true significance of the Industrial Revolution is that power [illegible] was an adjunct to the skill of the worker

[illegible]

"We Know More Geography than John Winthrop, Jr., Did When He Studied Here"

[illegible]

whereas the great inventions of the period caused transfer of skill to the point where the skill of the worker became an adjunct to the tool or machine. The steam engine supplied a very [illegible] power that could be [illegible] place."

The Father of Railroads

George Stephenson [illegible] paragraph [illegible] last [illegible] celebrated the centenary of the [illegible] of Stephenson, the Northumberland [illegible], who at the age of 17 [illegible] and [illegible] acquired [illegible] as the father of railways. He [illegible] the [illegible] rather than [illegible] Robert [illegible] the Northumbrian [illegible] the [illegible] locomotive [illegible].

Stephenson, [illegible] the [illegible] locomotive [illegible] he was respon-sible for the construction of the Stockton & Darlington Railway. A few weeks ago I [illegible] saw one of his early engines on the [illegible] of Darlington station. (A replica of Stephenson's "Rocket" is in South Kensington Museum.) When the [illegible] was [illegible] the question [illegible] whether horses or steam engines should be used for hauling [illegible] traffic.† Several years after, when the Liverpool & Manchester line was [illegible] the [illegible] advantage of [illegible] engines with cables or traveling engines [illegible] was [illegible] adopted.

A [illegible] article in the Times of August [illegible], [illegible] Before [illegible] Parliament [illegible] Stephen-

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* From "The [illegible]" [illegible]

† [illegible] T. H. [illegible] Vol. I, pp. [illegible]

[illegible]

Jolly Working Girls Enjoy a Bank Holiday on Hampstead Heath

[illegible]

[illegible] was staged in a conversation [illegible] [illegible] now went to stay [illegible] [illegible] traveling [illegible] of time as the rule as long." "Would not that," said [illegible], "be a very awkward circumstance?"

"A very awkward [illegible] indeed," replied Gerald, "in this Northumbrian [illegible] for the [illegible]."

The first steam cotton mill was established by Richard Arkwright at Cromford in Derbyshire in [illegible]. The famous Etruria pottery works were opened by Josiah Wedgwood in [illegible]. Matthew Boulton, friend of Franklin and partner of James Watt, made Soho [illegible] Birmingham. Dr William Small, after resigning his position as professor of mathematics at the College of William and Mary in Virginia, joined Boulton.

London, Pioneer of Department Stores

Many of the early American visitors to Great Britain came to study our industrial processes. Henry Marchant of Rhode Island [illegible] at Wilton in Lancashire [illegible] that it was lit by upwards of a thousand candles.

At Nottingham he was impressed by the [illegible] machines in use [illegible]. "The [illegible] were very [illegible] women [illegible]. In the rooms there were at work at least 1[illegible] girls all busily engaged at their work."*

Thomas Jefferson, during his visit to England, [illegible] always [illegible] the [illegible] for [illegible] which [illegible] in April, 1786. "I could write volumes on the improvements which [illegible] made [illegible] in the arts [illegible] deserves particular notice. [illegible] We know that [illegible] the most powerful [illegible] we [illegible]."

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* [illegible]

The British visitor to the United States in the 20th century usually assumes that the American department store is of domestic origin. If he turns to John Griscom's *A Year in Europe* (1818–19), he will find this American's description of a great novelty of the day, one of the first department stores, the Soho Bazaar, in Soho Square, London:

"An extensive suite of rooms on two floors (formed by throwing several houses into one), in which are collected almost every kind of article, . . . in the way of ingenuity, delicacy, and taste . . . this is a new kind of establishment, of which there are, at present, but two in London. The term, as well as the plan, has been imported from India."[7]

A Galaxy of British Scientists

From the founding of the Royal Society Britain has produced a succession of great engineers, astronomers, physicists, chemists, biologists, geologists, etc., hardly equaled and certainly not surpassed by those of any other country. Their work was not merely great—much of it was literally epoch-making.

Some have been of humble origin, like John Dalton, son of a poor weaver; others, like Henry Cavendish, were aristocrats who inherited immense wealth.

In the field of medicine William Harvey, who published his great work early in the reign of Charles I, is included in our series, as are the Hunter brothers. John Hunter may be regarded as the founder of modern surgery. Edward Jenner, the conqueror of smallpox, studied under John Hunter at St. George's Hospital (pages 474, 500, 503).

Sir Patrick Manson is regarded as the father of tropical medicine. He was the first to discover that a "particular blood-sucking insect is a necessary intermediary in the propagation of a specific disease—a discovery of the utmost importance to mankind."[*]

Another pioneer whom we remember gratefully is Ronald Ross, who discovered the life history of malarial parasites in mosquitoes and laid down methods for large-scale malaria reduction.

Others who have enriched our knowledge are Faraday, the father of the age of electricity, and Lord Rutherford, the New Zealander, who, in the words of Sir Arthur Eddington, "introduced the greatest change in our idea of matter since the time of Democritus" (pages 511 and 527).

In the discovery of the 96 chemical elements, the fundamental "building blocks" of which everything in Nature is constructed, British scientists are generally credited with the finding of 19 (including hydrogen, oxygen, barium, calcium, potassium, argon, helium, and neon), more than have been discovered by the research workers of any other nation. Six other elements were discovered by Britons jointly with workers of other nations.

The number generally accredited to scientists of other nations is: Swedish, 17; French, 11; German, 11; American, 6; Austrian, 2; Swiss, Italian, Polish, Russian, Hungarian, Spanish, Finnish, 1 each. Ten elements are considered to have been discovered by the ancients.

Revolution in Farming Methods

Alongside the Industrial Revolution—indeed, preceding it—a revolution in methods of agriculture was taking place in England. In due course it helped make Great Britain the supplier of pedigreed livestock to America and many other lands. In the early days of the colonization of North America the Mother Country shipped cattle, horses, sheep, goats, poultry, and even [illegible] to the New World.[‡] In the reign of George III we learn that "all the world came to England for horses, from the race-horse to the hardly less noble cart-horse."[‡]

Robert Bakewell, during the reign of this George, pioneered in the selective breeding of cattle and sheep to improve the quantity and quality of meat. Bakewell's methods were so successful and the reputation of his "fixed" breeds so high that in one year he made 1,200 guineas from the letting of one ram.

British experimenters produced the Shorthorn, Hereford, Aberdeen-Angus, and Devon breeds, which are the leading beef cattle today in the United States, Australia, and New Zealand. The Ayrshires, Jerseys, and Guernseys which are such large milk producers in American dairy herds originated in the British Isles.

As early as the 19th century British farmers had developed several breeds of sheep and pigs that were two or three times as efficient in meat production as the old unimproved stocks. They worked out principles of proper animal feeding from which stock raisers now benefit everywhere.

British investigators played a leading part in the study of agricultural chemistry and plant nutrition—what the plant draws from

* *A History of Tropical Medicine*, by H. Harold Scott, vol. 2, p. 1071, 1942. The Williams & Wilkins Company, Baltimore.

† An early reference to the sending of horses to Virginia is contained in a letter from Gabriel Archer who is urging in 1609 that the vessel be sailed in to take "six mares and two horses at Plymouth." *The Germans of the United States*, by Alexander Brown, vol. 1, p. [illegible]

‡ *English Social History*, by G. M. Trevelyan, Longmans, 1942, p. [illegible]

For the First Time Since the War Judges Prepare to Open the Legal Year

The picture of the stately procession marching from a service in Westminster Abbey [illegible] appeared in the London *Times*, October 16, 1946. Wearing robes [illegible] the Lord Chancellor.

[illegible] soil, water and air. The soil is not [illegible] use of manures and other fertilizers.

Thus developed land extended by [illegible] a [illegible] generation and increasing the fertility of the soil.

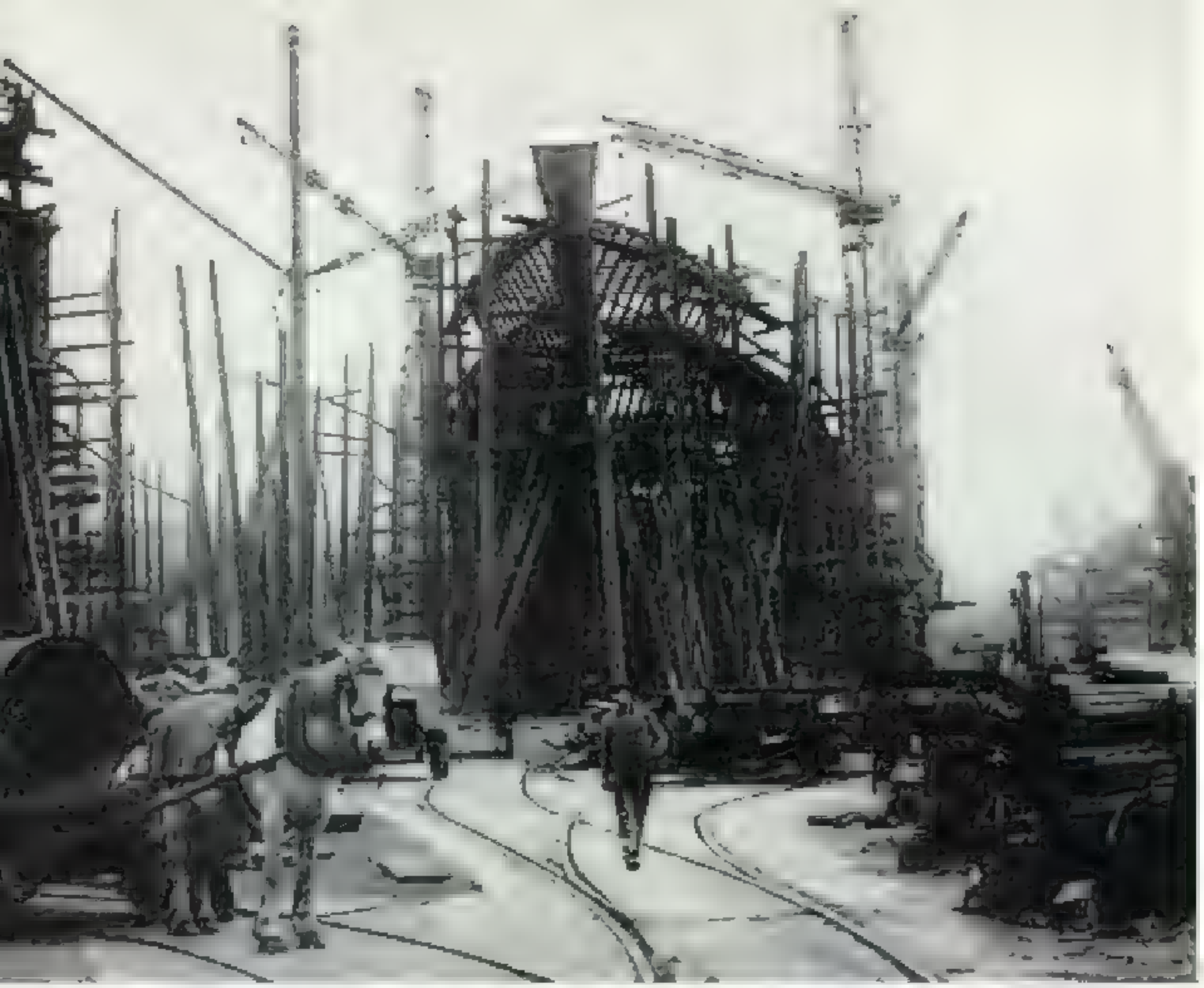
Two young Englishmen, J. B. Lawes and J. H. Gilbert, started a plot experiment at Rothamsted [illegible] 87 years ago to prove the modern scientific principles of [illegible]. At Rothamsted, Lawes's Rothamsted Experiment Station, a field plot on which wheat has been grown [illegible] 1943 the one hundredth successive crop of wheat.

Lawes and Gilbert showed that the phosphate of natural rock deposits is soluble and can be fed to plants as artificial fertilizers. They started the fertilizer industry.

Even mechanized farming, so highly developed now in the United States, [illegible] its origins in Britain. James Small's cast-iron mouldboard plow, the drill for planting, the [illegible] were British [illegible] which were the forerunners of modern farm machinery.

Ingenious Britons at Kew Gardens London imported from Brazil seeds of the rubber tree and from seedlings raised at Kew started and developed the rubber plantation industry of Southeast Asia that by 1941 was supplying [illegible] tons of rubber a year [illegible].

In the New World, [illegible] of British stock [illegible] the genius of the British race. The ten inventions [illegible] at the National Celebration of the American patent system in Washington, 1946, as the greatest made in the United States were achieved by men of British ancestry: Alexander Graham Bell, telephone; Thomas Alva Edison, electric light; Charles Goodyear, rubber; Charles Martin Hall, aluminum; Elias Howe, sewing machine; Cyrus Hall McCormick, reaper; Samuel Morse, telegraph;



Though Orders Are at a Peak, British Shipyards Cling to Custom Building Methods

[illegible]

[illegible] Westinghouse, air brake; Wilbur and Orville Wright, airplane; Eli Whitney, cotton gin.

Sir Edward Salisbury, President of the Royal Society, has made the point that the [illegible] of industrial [illegible], [illegible] between British and American [illegible] discoveries on one side of the water would be numerically [illegible] approximately equal on the other side.

It is almost impossible to name a [illegible] which [illegible] British and American achievement.

Most Valuable Cargo Ever Brought to the United States

In [illegible] the prospective [illegible] the British packing [illegible] was completed a month greater than their [illegible] Young men [illegible] engineering, medicine, and [illegible] are excellent examples.

[illegible] that in the early days of the [illegible] exchange the Royal gave more than they received. [illegible] Fellows Pierre [illegible] Scientific [illegible] of World War II [illegible] the U. S. Office of Scientific Research and Development. The greatest of their contributions [illegible] Dr. Bush [illegible] the development of the proximity fuze, [illegible] and [illegible] power of [illegible] which [illegible] the [illegible] modern [illegible] [illegible] the [illegible] which we owe to British physicists, [illegible] the [illegible] a [illegible] [illegible] because of [illegible] of less than 5 centimeters.

When the [illegible] of the British Mission [illegible] in America to supervise [illegible] they carried the most valuable cargo ever

ought to our shores. It sparked the whole development of microwave radar and constituted the most important item in reverse Lease-Lend.' *

But Sir Henry Tizard, head of the British Mission, emphasizes the fact that while "the magnetron, which contributed more to the success of the Allies than any other single invention, was a product of British science, it had to be redesigned in America for economical manufacture.

"Penicillin, the greatest practical achievement of medical research during the war, also originated in Britain, but unless American skill in large-scale manufacture had been available, many thousands of men, who now enjoy a healthy life, would have died."†

Among British social reformers we have been able to include but few, among them Florence Nightingale, who revolutionized our methods of nursing (page 513). To this great company rightly belong John Howard and Elizabeth Fry, prison reformers; Lord Shaftesbury, the seventh Earl, who fought the abuses of the industrial age; and, above all, William Wilberforce, one of the greatest benefactors of humanity.

A Turning Point in History

When the British Empire was expanding rapidly during the Napoleonic Wars, it had increasing contacts with the colored races. Fortunately, the conscience of the nation was stirring, and, as Dr. G. M. Trevelyan points out, "a turning point in the history of the world" occurred when Wilberforce and his friends, Evangelicals and Quakers, persuaded Parliament to put a stop to the slave trade in 1807 and to abolish slavery throughout the Empire in 1833.‡

At the Congress of Vienna, after the defeat of Napoleon, Great Britain through Lord Castlereagh, in a spirit of altruism rare in those days, persuaded the European powers to agree to the suppression of the slave trade in their territories. However great Britain's share in the slave trade and in the horrors of "the Atlantic passage," she was making amends for the past. She paid the slave owners £20,000,000 in compensation.

Henceforth the Union Jack became the symbol of freedom for the black man. Throughout the 19th century the Royal Navy policed the seas and hunted the slavers in their lairs east of Suez.

In the present century, Robert Baden-Powell founded the Boy Scout movement, which has profoundly influenced the youth of many nations.

Another Englishman who has influenced the life of our times is Wilfred T. Grenfell, who gave his life to the service of the inhabitants of Labrador. His example fired many thousands of young men throughout the universities of the English-speaking world.

The World of the Spirit

In the world of the spirit, British contributions to the common heritage have been great. John Wycliffe laid the foundations of the Puritanism that was to be Britain's special contribution to religious thought. He translated the Bible with the help of a band of "poor priests" and brought Christ's teaching to the humblest villager.

Britain's impact on America was made through such men as Robert Browne, founder of the Brownists, whose doctrines inspired the Pilgrim Fathers, and John Knox, Scottish divine and follower of Calvin.

George Fox, founder of Quakerism, was the son of a Puritan weaver; among those whom he influenced was William Penn.

In the following century John Wesley transformed the very nature of his generation (page 491).

In the 19th century William Booth and his wife established the Salvation Army and ministered to the unfortunates in the slums of industrial England. Subsequently they extended their work throughout the world.

Britain and Its Stewardship in India

With the granting of independence to India and Pakistan, on August 15, 1947, a great event in world history took place. Great Britain, which for a couple of centuries had ruled the Indian subcontinent, containing a sixth of the human race, passed to its peoples of her own free will the control of their own destiny.

Never in history had a great empire, in a moment of victory, relinquished its control over its fairest dependency and passed on the torch of freedom to the inhabitants.

That the peoples of India would one day be free to decide their future was in fact inevitable from the passing of the India Bill in 1833.

Thomas Babington Macaulay, speaking in the House of Commons on the measure, predicted "that the public mind of India may expand under our system until it has outgrown that system; that by good government we may educate our subjects into a capacity for

* From *Scientists Against Time*, by James Phinney Baxter 3rd, pp. 141-143—"Radar and Loran."

† From the Presidential Address to the British Association for the Advancement of Science, *The Passing World*, by Sir Henry Tizard, September 8, 1948.

‡ *History of England* (Longmans), 1947; p. 520.

Britain Is Making More than Half the Merchant Ships Being Built in the World Today

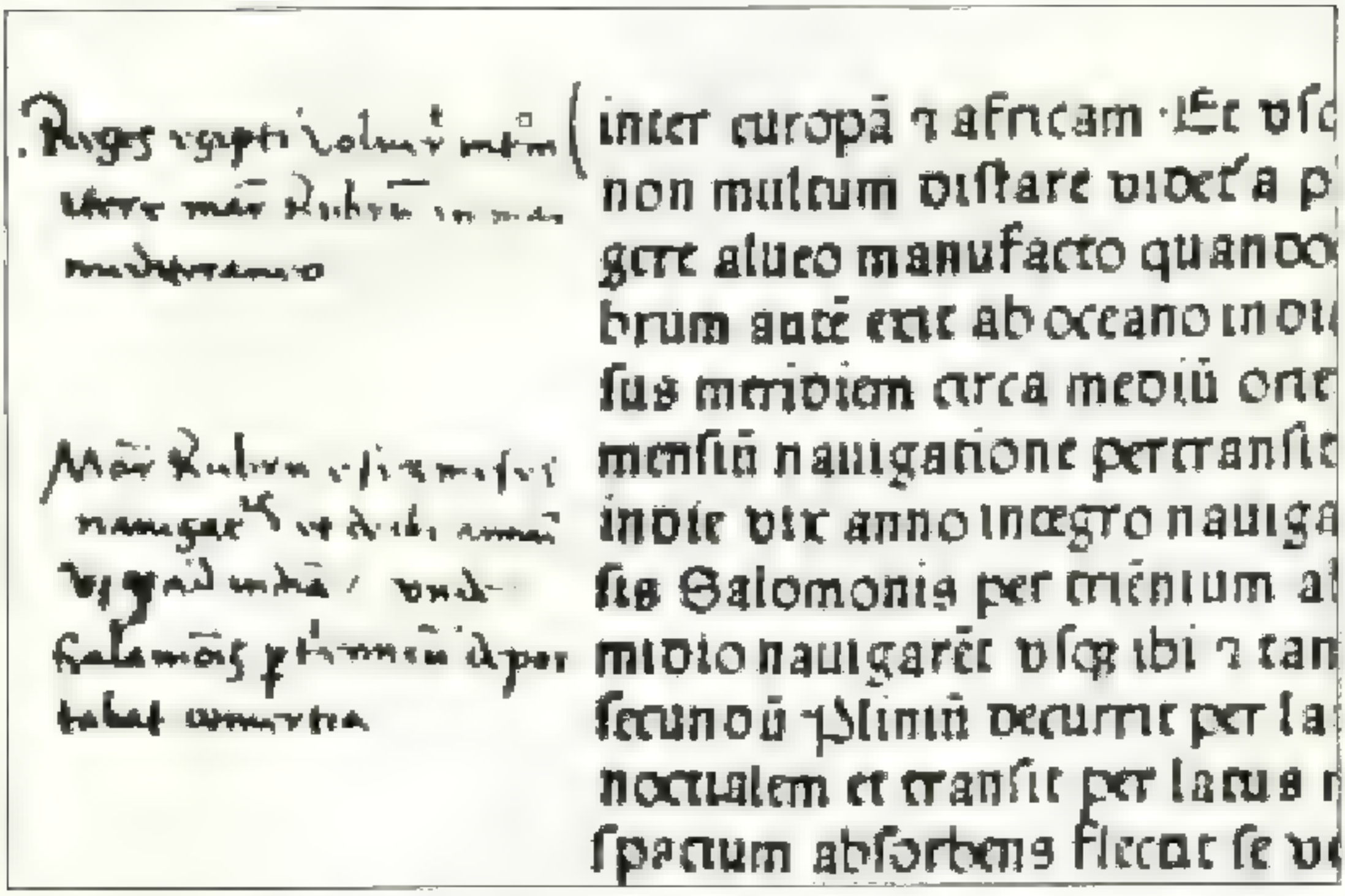
On Thanksgiving Sunday, May 13, 1945, after V-E Day, Throngs Cheer the King and Queen from Buckingham Palace to St. Paul's Cathedral

In Old Hingham, Samuel Gleason Learns the Story of the Founders of New England at Its Source

[illegible]

"Dr. Livingstone, I Presume?" Said H. M. Stanley When He Found David Livingstone in Darkest Africa, November 10, 1871

[illegible]



Columbus Himself Wrote These Marginal Notes on Pierre d'Ailly's Map Treatise

[illegible] permission of Antiquarian Prints, [illegible]

[illegible] They may in some [illegible] European institutions."

[illegible] "be the pioneer [illegible] in British history."

We are still too near the events which [illegible] independence to the [illegible] of India and Pakistan to be able to [illegible] the rule in the Indian [illegible] Among our 300 years of [illegible] with India, Great Britain has no [illegible] [illegible] impartial or [illegible] simply the record of British supremacy in India [illegible] the last [illegible] and [illegible] which [illegible] the [illegible] of the Mogul Empire [illegible] the [illegible] of the Pax Britannica.

British Art

[illegible] importance as in other [illegible] [illegible] to Holbein, the German portrait painter who [illegible] years in England during the reign of Henry VIII, the [illegible] [illegible] the King [illegible] Holbein [illegible] to the Indian [illegible]

In the reign of Elizabeth an English school of miniature painting [illegible] Hilliard [illegible] scenes from the life around [illegible] life was to painting what Dickens was to the novel.

If British art [illegible] in painting, the following [illegible] developments in portrait and landscape [illegible] of Edwin Landseer [illegible] and Romney. [illegible] [illegible] of Reynolds [illegible] and Romney. [illegible] [illegible] at [illegible]

[illegible] West, the Quaker from [illegible] in Italy, [illegible] George III. He was one of the founders of the Royal Academy, [illegible] President. [illegible]

[illegible]

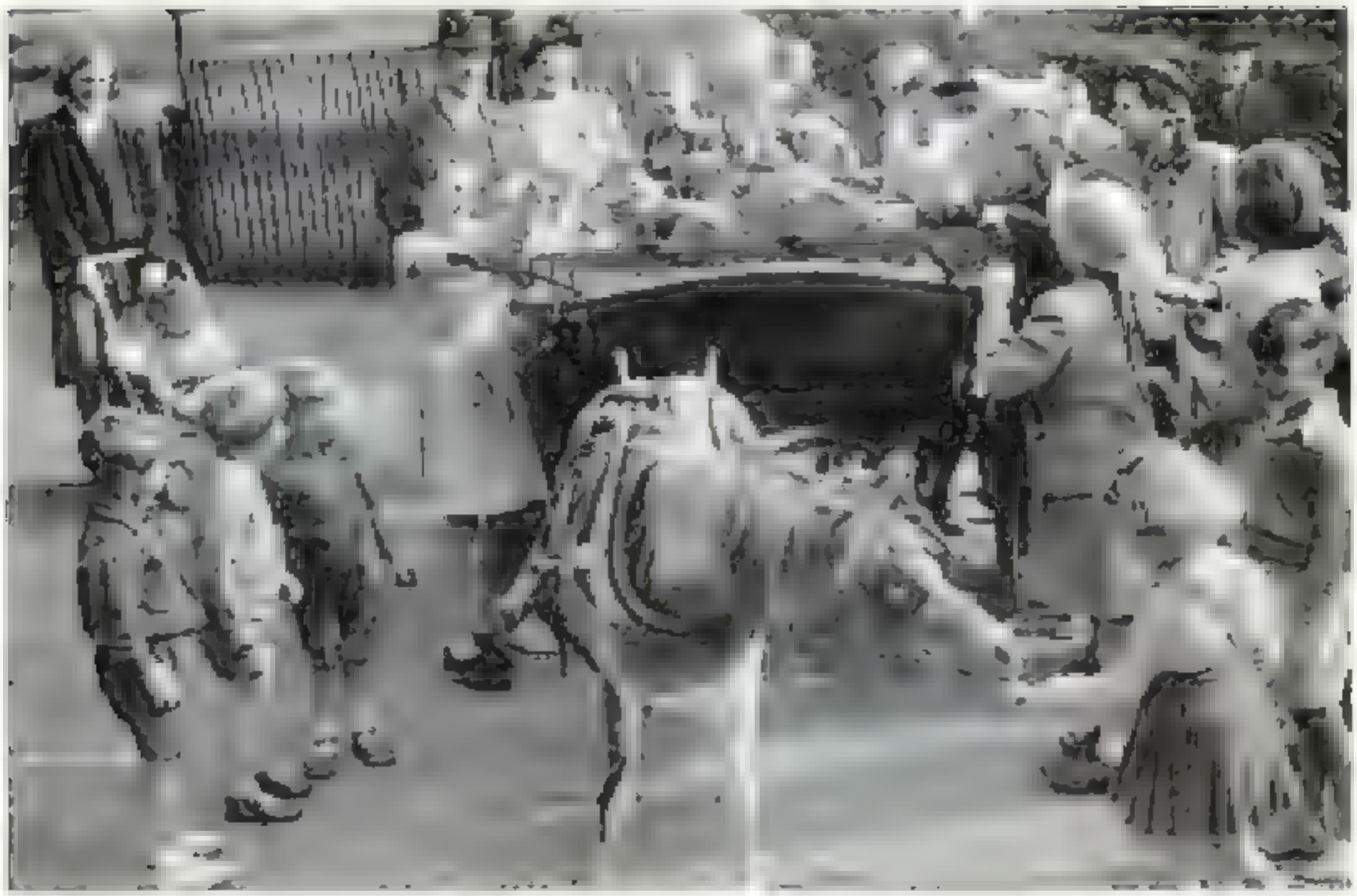
An Iowa Girl's Hereford Steer Is a Grand Champion

[illegible]

[illegible]

The First American "Liner"

[illegible]



Kenny the Shetland Draws a Litter Cart in Kensington Gardens

Because Tommies prefer extremely fond of [illegible] and [illegible] pets and [illegible] Ministry of Work [illegible] of having [illegible] about the [illegible] The [illegible]

[illegible] the 16th century, but we should thank gratefully [illegible] of Charles II. for in 1675 he founded the Royal Observatory at Greenwich. Its purpose was [illegible] to solve new observations of the heavens; that so [illegible] may be [illegible] tables for correcting [illegible] of their ships at sea."

Simon Newcomb, the American astronomer, has referred to the work of Greenwich Observatory fifty years ago: "The most useful [illegible] astronomy has hitherto been that which [illegible] applied to the determination [illegible] land and sea. The [illegible] has been so [illegible] for in this direction as [illegible] mark that, if this branch of [illegible] were entirely lost, [illegible] from the [illegible] observations [illegible]

The [illegible] of [illegible] long [illegible] to the man who [illegible] invent [illegible] so doing. After a long [illegible] John Harrison [illegible]

[illegible] British [illegible] work [illegible] the [illegible] in providing aids to the mariner, and in [illegible] lighthouses on dangerous shores. [illegible] Daniel Defoe [illegible] his life to a lighthouse [illegible] "The Cornish [illegible]" Lloyd's [illegible] are familiar landmarks throughout the world.

British Drama in America

Following American independence and for a long while thereafter, the American stage was dependent on British talent. Many leading British actors [illegible] and later made a tour of the American States. Some became so popular that [illegible] in America and helped to [illegible] the stage.

[illegible] stage Harry Lauder had an [illegible] American following. Operettas of Gilbert and Sullivan as *H.M.S. Pinafore*, *Pirates of Penzance*, *The Gondoliers*, and *The Mikado* are [illegible]

[illegible] have great [illegible] the Western World with their entertainment [illegible] music, and golf. [illegible]

games go back, of course, to very ancient times: it is stated that the original inhabitants of this island learned how to play football from the Romans, although our friends across the Irish Sea claim that they played a form of the game in Ireland before Julius Caesar set his foot on British soil.

Edward II forbade the game in consequence of "the great noise in the city caused by hustling over large balls." Philip Stubbs, two and a half centuries later, in his *Anatomie of Abuses* (1583), refers to football as "a devilishe pastime . . . and hereof groweth envy, rancour, and malice, and sometimes brawling, murther, homicide, and great effusion of blood, as experience daily teacheth." Certainly the Elizabethans were lusty fellows.

The Heritage of Sport

Modern football became widespread in the middle of the 19th century. There is a good description of the game as played at Rugby in *Tom Brown's School Days*. Association football was first played at Cambridge University. The first football contest between Britain and the United States was played at Yale University between a team of old Etonians and Yale. English Rugby was first played at Harvard.

The "Royal and Ancient Game of Golf"—"gowff," it was called long ago—is apparently of Dutch origin, but it reached the United States from Scotland only toward the end of the 19th century. Two years before the *Mayflower* sailed, James I (James VI of Scotland) was evidently concerned that his Scottish subjects were spending too many "bawbees" in importing large supplies of golf balls from Holland; he caused legislation to be passed to protect the home industry, for he wrote from Salisbury, on August 5, 1618, "Na small quantitie of gold and silver is transported zearly [i.e., yearly] out of his Hienes' kingdom of Scotelland."

James IV and James V of Scotland, great-grandfather and grandfather of James I of England, were golfers, and so, apparently, was his mother, ill-fated Mary Queen of Scots. Her enemies asserted that such was her indifference to the fate of Darnley, her husband, that a few days after his death she "was seen playing golf and pall-mall in the fields beside Seton."

Americans took up the game so enthusiastically that Walter Travis won the British Amateur Championship at Sandwich in Kent in 1904. Many other Americans have since won this prize.

Lawn tennis was invented in 1874 by Maj. Walter Clopton Wingfield, who took out a patent for a pastime called Sphairistike, described as "a new and improved portable court for playing the ancient game of tennis." Its popularity grew so rapidly—it was now called lawn tennis—that in the following year a committee met at Lord's Cricket Ground and drew up a code of rules. In 1877 the all-England championships were played at Wimbledon, where the international contests still take place. In the United States lawn tennis was played at Nahant, near Boston, within a year of its invention in England; in 1881 the United States Lawn Tennis Association was formed and adopted the English rules.

Comrades in Arms

When in April, 1917, the people of the United States of America decided to fight alongside the Allies on the battlefields of Europe, another great moment in history had arrived. For the first time the two English-speaking Commonwealths were fighting side by side; some people, among them Walter Hines Page, held that the greatest outcome of World War I was the coming together of the English-speaking peoples.

In the second World War the cooperation between our nations was even closer. In Delhi, in 1943 and 1944, when going to discuss problems with the Southeast Asia Command, under Lord Mountbatten, I never knew in advance whether I should be dealing with an American or a Briton. The Allied sailors, soldiers, and airmen sat together, they worked together, they planned together, they suffered together, and they died together that right might triumph.

Tennyson Sounds the Keynote of the British Way

Tennyson sums up the British Way in parts of two poems, "You Ask Me Why" and "To the Queen":

It is the land that freemen till
That sober-suited Freedom chose,
The land, where girt with friends or foes
A man may speak the thing he will,

A land of settled government,
A land of just and old renown,
Where Freedom slowly broadens down
From precedent to precedent:

* * * * * *

And statesmen at her council met
Who knew the seasons when to lead
Occasion by the hand, and make
The bounds of Freedom wider yet

By shaping some august decree
Which kept her throne unshaken still,
Broad based upon her people's will
And compass'd by the living sea.

Fig. Fundamental Models in Biological Work. With the Blind Eye Represent Convergence

O[illegible]

The Roman Wall (A. D. 121–211)

A [illegible] visit to the Roman Wall, which stretches 73 miles from the mouth of the Tyne to Solway Firth; for the Roman occupation was virtually the beginning of British history. About the Celtic ancestors who lived in the island before the coming of Julius Caesar little is known.

Most schoolboys know that Julius Caesar paid two visits to Britain, in 55 and 54 B. C. He came to punish "the interfering Islanders" for coming to the help of their kinsfolk in Gaul. Then ensued "a long forgetfulness of Britain" till Claudius came, A. D. 43, and incidentally massacred a number of troublesome Druids. A triumph was staged on Claudius's return to Rome, and he was hailed as "Britannicus."

The Romans built walled towns and baths; they constructed virtually indestructible highways . . . along which English motorists still drive in comfort despite the fact that the roadbeds have been in use for 18 centuries; they drained fenlands and cut down some forests. In the Roman settlements the leading citizens and warriors had their pleasant villas with "central heating." The home of a prominent Roman probably was much better heated than the houses of the majority of present-day Englishmen.

In Roman Britain the total population was probably no more than half a million. The largest city was London, first mentioned by Tacitus, a Celtic name but a Roman foundation. Scholars who have studied excavations of numerous sites believe that London in Roman times had more stone and brick buildings than at any subsequent time until after the Great Fire, which laid waste the city in 1666.

We may regard Agricola as the sponsor of the Wall, for although it was left to Hadrian to construct it, the builder received his inspiration from Agricola. Agricola foresaw that the inhabitants on the south of the border would have to take strong measures against the Scots and Picts, and therefore he built a chain of forts from Tyne to Solway.

There were in fact two walls, the first built by Hadrian, A. D. 121–26; the second by Severus 85 years later.

Hadrian visited Britain several years before he began his construction. In the British Museum can be seen the head of a colossal statue of him which was dredged from the bottom of the River Thames below the site of London Bridge.

Hadrian's wall consisted of a "great ditch between mounds, called a *vallum*." Between the vallum and the wall ran a military road. Severus rebuilt Hadrian's wall, A. D. 211, and replaced the turf ramparts by solid masonry.

The Wall represents the limit of effective Roman occupation. It is true that under Severus, who, "racked with gout, traveled in a litter," the legionaries penetrated as far north as Moray Firth; but Severus wisely left the inhabitants of Scotland to their own devices and decided that the Wall should mark the northern boundary between the Empire and the "barbarians."

Like the Great Wall of China, our Wall crawls up hill and down dale. At irregular intervals there were great forts which served as camps, barracks, storehouses, and baths. At the fort of Borcovicus can be seen the wheel ruts of Roman chariots, similar in measurement to those at Pompeii. The sight, strangely moving, reveals how far-reaching were the tentacles of Imperial Rome.

In some places the vandal has been at work, and the stones of the Wall have been used in the construction of farmhouses and buildings. In other stretches the Wall stands as it was in Roman times, climbing up lonely and lofty heights.

It is not easy to estimate the exact influence which the Roman occupation has had on Britain. Probably its permanent effect has been much less than that caused in France and Spain by the presence of Caesar's armies. Nevertheless, there are today many British families with some Roman blood in their veins, for many of the imperial legionaries who came under Caesar's banner took to themselves native wives.

Apparently all but a few signs of the Roman occupation had vanished by the time of Alfred the Great. Vikings and Norsemen had wrought havoc throughout the land.

By 1066 the Islanders had become a mongrel race, described by Defoe, in his *True-Born Englishman*, as

> Your Roman-Saxon-Danish-Norman-English . . .
> A True Born Englishman's a contradiction!
> In speech an hour, in fact a fiction! . . .
> A metaphor invented to express
> A man akin to all the universe!

Under Hadrian British lasses were recruited to serve the Roman Empire. It is highly probable that the recruits were offspring of the unions between Caesar's men and the fair-haired daughters of Albion.

The end of the Roman occupation of Britain came early in the fifth century, when Rome had her troubles nearer home and the Emperor Honorius decided that the Britons could no longer rely on the Empire to protect them.

To Hold on Six Agonizing Days, Allied Troops on First Bridgehead Have

Alfred the Great (848?–901)

Alfred found learning dead and he restored it.
Education neglected and he revived it.
The laws powerless and he gave them force.
The Church debased and he raised it.
The land ravaged by a fearful enemy
From which he delivered it.
Alfred's name will live as long
As mankind shall respect the past.

A STATUE BEARING this inscription commands the main street in the little town of Wantage, Berkshire, where Alfred, justly called the Great, was born about 848. Although for part of his reign Alfred ruled over only Wessex, he laid the foundation for a united England and before the close of his life wrested London and Canterbury from the Danes.

Fourth and youngest son of King Æthelwulf, he succeeded to the West Saxon throne in 871 when his brother Æthelred was slain in battle. The blackest hour in the early annals of England struck in 876 when the Dane Guthrum, usurper of the kingship of East Anglia, invaded the south coast, overwhelmed Dorsetshire, and took Exeter.

Caught unprepared by this treacherous violation of a truce, Alfred retreated to the Somerset fens and threw up an island fort in the well-nigh impenetrable marshes, where, unseen, he could watch the movements of the enemy. He recruited an army of Hampshire, Wiltshire, and Somerset men, using the Danish peril to unite his people. When his troops were ready, he made a surprise attack on the Danes at Ethandun (now Edington) in Wiltshire and defeated them in a pitched battle.

So signal was his success that in the Peace of Wedmore (879) he forced King Guthrum and some of Guthrum's followers to receive baptism into the Christian faith, and to withdraw from the West Saxon land. Wessex was cleared of the Danes, and also Mercia west of the Roman Watling Street. Not since the Vikings' first invasion of England had the English scored so decisive a victory.

Alfred and his kingdom of Wessex now stood forth as the only English power in Britain which was stronger than the invaders, and he was regarded by the people as their champion and deliverer. He had saved his kingdom from Scandinavian domination and safeguarded English Christianity.

Alfred constructed a new kind of ship better able to withstand the Vikings. To him is due the conception that England is an island realm and must be defended at sea and not on land. He regarded the North Sea and the English Channel as the national frontiers.

There was no end to his activities. Drawing on Mosaic experience, he codified the nation's laws; comparing the low state of culture in Wessex with that of the Continent, he determined to make his capital the greatest seat of learning in the island.

When he came to the throne, he found that "not a single priest south of the Thames was acquainted with Latin." He became his own translator and editor, and made available to his people the treasures of Latin manuals in their own tongue. The *Anglo-Saxon Chronicle* compiled in his reign remains the first vernacular history of any Teutonic people. To him also was due the survival of the first English epic, *Beowulf*; the Venerable Bede's *History*; and other priceless books.

His zeal for religion and scholarship probably had its beginning when as a child he was taken by his father to Rome and to the court of Charles the Bald, King of the West Franks. Confirmed by Pope Leo IV who, legend says, "hallowed him to King," he had opportunities to observe the measures taken by the pontiff for protecting the Eternal City from the Saracens and to meet many literary characters of the age, both in Rome and in France.

He established a school at his court and insisted that "those whom it is proposed to elevate further and promote to a higher office should be taught Latin," which at the time was the only well-established literary language. Lamenting his own lack of learning, he studied assiduously and asked that "all the youth of England of free men . . . be set to learn . . . until they are able to read English writing."

J. R. Green places him among the world's greatest men because of "the moral grandeur of his life." "He is the first instance in the history of Christendom of a ruler who put aside every personal aim or ambition, to devote himself wholly to the welfare of those whom he had ruled."

Methodical in the use of his time, he devised a candle covered by a lantern to measure the hours of his busy day. He had infinite patience with his subjects and was ever willing to hear complaints.

I like to think of him carrying in his bosom "a little hand-book in which he jotted down things as they struck him, now a bit of family genealogy, now a prayer, now a story. . . . The writer of English history may be pardoned if he lingers over the figure of the King in whose court, at whose impulse, it may be in whose very words, English history begins."

When Alfred died in 901, his body was brought by the monks to the New Minster at Winchester, though exactly where he lies in the old city is not known.

Then Sir Kade Fierth Cutched on with Chasury"

[illegible]

Lady Godiva (1040–80)

THE SEAL of approval has been set on the story of Lady Godiva by the poet Tennyson, by the great English artist Sir Edwin Landseer, whose painting is reproduced in our plate, and by many learned scribes. Why question such authority?

The boundary line between history and legend is sometimes hazy. If rationalists were permitted to work their iconoclastic will, much of the romance of the past would be lost. Critics say that there never was a King Arthur who established a Round Table and that the legend of Lady Godiva is pure moonshine. Nevertheless, modern readers who care more for imagination than cold facts are inclined to agree with the Victorian poet R. B. Brough.

> Go Heal! Not for such lore homes
> Of warm and kingcraft's broken history
> Would I the chastened legend use
> Or view it in the blouse's hues
> Of folded myth or mystery

Godiva is said to have married Leofric a quarter of a century before the arrival of William the Conqueror in England; she died some years before the Domesday survey (1085–86). Her husband was ruler of Mercia and one of the three great earls of the realm. Both husband and wife were liberal benefactors of the Church.

The earliest narrative of the famous ride through the streets of Coventry (the skeptics say there was no city of Coventry in the 11th century), which has eclipsed her fame as a benefactress, is given in the *Flores Historiarum* of Roger of Wendover (died 1237), but he relied for his information on a mid-12th-century writer. Roger represents Godiva as begging the release of the ville of Coventry from a heavy bondage of toll.

Leofric replied, in the oft-quoted words: "Mount your horse naked, and pass through the market of the ville, from one end to the other, when the people are assembled, and on your return you shall obtain what you ask."

Attended by two soldiers, Godiva, as Tennyson says, "rode forth, clothed on with chastity, her flowing tresses serving as scant covering. Leofric was overcome with admiration of her sinless act and granted the release by charter—so runs the tale.

The writer of the article on Leofric in the *Dictionary of National Biography* comes to the defense of the supposedly cruel husband of the heroic lady. Citing evidence of Leofric's seemly behavior on other occasions, he declares that the man's character alone proves that the tale of his boorish conduct is an absurdity.

In a travel report written in 1654, the "white steed" is introduced. "She purchased and redeemed their lost infringed liberties and freedoms, and obtained remission of heavy tributes imposed upon them, by undertaking a hard and unseemly task, which was to ride naked openly at high noon day through the city on a milk-white steed, which she willingly performed, according to her lord's strict injunction. It may be very well discussed here whether his hatred or his love preceded. Her fair long hair did much offend the wanton's dancing eye."

Another 17th-century story says: "But about the midst of the City her horse neighed, whereof one desirous to see the strange Case left downe a Window, and looked out, for which fact or for that the horse did neigh, as the cause thereof, Though all the Towne were Franchised, yet horses were not toll-free to this day."

Concerning "peeping Tom," a Latin epistle published in the *Gentleman's Magazine* a a century or so later reports: "A groom of the countess dared to violate her commands. The countess's horse, on discovering its trainer through the windows, set up neighing, and so betrayed the scoundrel."

An obliging traveler in 1782 supplies yet further information: "Legend says that, previous to her ride, all the inhabitants were ordered, on pain of death, to shut themselves up during the time; but that the curiosity of a certain taylor, overcoming fear, took a single peep; which is commemorated even at present, by a figure looking out of a wall in the great street. To this day, the love of Godiva to the city is annually remembered by a procession; and a valant *jaw* still rides in silk, closely fitted to her limbs, and of colour emulating their complexion."

In the 19th century skepticism about Lady Godiva was rife; perhaps neighboring cities were jealous of Coventry's proud heritage as the place where "the perfect model of an Anglo-Saxon lady" acquired immortal fame.

Moncure D. Conway, the American preacher and author who saw the Landseer painting at the Royal Academy in 1866, wrote of his impression:

"The Lady's elderly duenna is represented turning her head aside from the nude lady and shutting her eyes tightly. There is a look on this domestic's face which says plainly 'I wash my eyes clean of all such improper conduct; and before I would do such a thing, every man, woman, and child in Coventry should broken be on the wheel!' Everyone who looks at the picture smiles; but all see in her, rather than the mounted lady, the representative of the womanhood of England."

When the Conspirators Enthroned the Anti-Saxon by Calling Twelve Fearless Men to Determine Their Fate

RIDING IN FALAISE one day, Duke Robert of Normandy [illegible] of William the Conqueror [illegible] Arlotta, daughter of a tanner washing her hair [illegible] Her made [illegible]

When William [illegible] Duke [illegible] Normandy [illegible] concept of kingship and statesmanship was taking shape. Even his [illegible]

He invaded England and on the battlefield of Senlac (Hastings), in [illegible] crowned by his men. Harold had fought stubbornly, but as the sun [illegible]

William's victory was due to the Normans' superior [illegible] forces in the use of cavalry and bowmen. [illegible] William II, [illegible] that William [illegible] 12,000 men, transported across the English Channel in small sailing craft.

William [illegible] Norwegian army had invaded northern England, and Harold had therefore to fight on two fronts.

William [illegible] the first years of his reign. He was not only a great warrior and a great statesman, but a born leader of men. On the winter march to Chester he showed his genius for winning loyalty when he walked at the head of his dispirited troops and helped with his own hands to [illegible]

[illegible] William [illegible] Fisher writes "vast cathedrals rose to the heavens, erected by the [illegible] peasantry as is the first towering vision of modern New York to a poor lad fresh from a humble cabin [illegible]

The feudal system introduced by William as a means of retaining what he had won differed from the feudal system that existed on the Continent. Not only the great noblemen who received large estates [illegible] King but his lowly dependent as well.

In all feudal [illegible] placed [illegible] hand and [illegible] regard, and I will keep faith and loyalty to you in life and [illegible] *direct to the Crown*, thus every Englishman pledged himself personally to be loyal to the King, and the country was saved from the worst evils of feudalism.

William ordered compiled the *Domesday Book*, which is on view in the Public Record Office in London. Shrewd man that he was, he desired to know the exact amount of the Danegeld (a royal tax which could be levied at the King's discretion) that he would receive from [illegible] throughout the land of the estates and possessions of every landowner.

[illegible] fact-finding commission, and insured that the information supplied by [illegible] by jury was adopted, when the sworn twelve became, not the witnesses to fact, but the judges of evidence.

William summoned a great assembly, or moot, of the landowners in 1086, when each one of them swore allegiance to him. The King must have looked back with satisfaction on his work of twenty years.

The American Illustrator, Kenneth Riley, who painted our picture of William the Conqueror [illegible] Norman [illegible] King John [illegible] and Anne Hathaway [illegible] King James [illegible]

Richard the Lionheart (1157–99)

RICHARD, COEUR DE LION, was born [illegible] in 1157 and crowned at Westminster in 1189. He was the King who never stayed [illegible] In the nearly ten years of his reign, his longest sojourn in England was only from March, 1194, until May of the same year. No sooner was his coronation over than he set off on the Third Crusade.

His chief ambitions were to shine in battle against the Saracen and to kneel before the Holy Sepulcher after winning it for Christendom. To further these aims, he was ready to sell all he possessed—castles, villas, and farms. Everything went into the pot—the treasures of England, Normandy, Scotland, Sicily, and Cyprus. In a wry jest too serious for humor he once remarked, "I would sell London itself could I find a purchaser rich enough."

He and Philip Augustus of France were bad allies, and despite Richard's heavy [illegible] and [illegible] Crusade [illegible] The Lionheart's [illegible] (tonight was the capture of Acre, two weeks after his landing, July 12, 1191). Even when he was ill, his spirit was undimmed. He had himself carried out to superintend the efforts of his crossbowmen, and, propped upon silken cushions, plied a crossbow with his own hands.

Given the title [illegible] in his fiction, he was a romantic hero [illegible] in Germany [illegible] An American artist, Howard Pyle, [illegible] as *Merry Adventures of Robin Hood* how King Richard came to Sherwood Forest [illegible] and feasted with Robin Hood and his outlaws. And, for once, the legend goes, Robin lost an archery contest, and King Richard gave him as penalty a buffet that knocked him rolling on the sward. The physical prowess of the Lionheart [illegible] was the subject of many a ballad and tale.

Richard's [illegible] "was a bad man, a bad father, a [illegible], and a bad King." But this was only one side of the picture; he was rather "a splendid savage, with most of the faults and some of the virtues of the semisavage age in which he lived." The ruthless warrior was also the [illegible] knight-errant who could show courtesy to women. In him we see a mixture of the barbaric age of the 12th century and the [illegible] of chivalry combined.

He was honest about his vices and admitted that pride, rapacity, and luxury were "his three daughters." Not in the least vindictive, he [illegible] King John, who had been intriguing in his absence, and permitted the traitor to retain his property.

The man of blood was also a lover of music and took a deep interest in the services of his chapel, where he was often seen walking up and down the choir beating time with his hand and encouraging the choristers to sing out.

On the Crusade Richard found a worthy foe in Saladin, the Turk, who [illegible] the best tradition of Moslem culture. Saladin was [illegible] to kneel in prayer to vindicate the "unbelievers." "Let us purge our eyes of the sin this [illegible] was to do for the honor of the Cross."

[illegible] Richard could understand. To Saladin more than to any other man, was due the stemming of the tide of Western conquest. In *The Talisman* Scott describes the famous incident when Saladin [illegible] as a gift to Richard a fine [illegible] horse, which Richard, tempted by [illegible] to lowness of pride, was to accept only with the disdainful [illegible] of his fortune that he accepted the [illegible] from his hand.

The three vices of the Lion were better qualities, and [illegible] Regarding [illegible] "The world [illegible] was in need of the idea of chivalry." When the taming of the three Gaul's [illegible] gone, the [illegible] was forced to concentrate himself to the service of God, Fatherland, and duty. Chivalry made a strong appeal [illegible] the [illegible] of the Middle Ages to [illegible] spiritual values.

The ritual and ceremonies of knighthood were evolved in a pious age. After taking a ritual bath, the young knight passed [illegible] and then, confessing [illegible] received "in sacrament." The greatest moment in his life had come, and he undertook "to protect the Church, the widows, the orphans, the desolate, and the oppressed." The era has been summed up as marking the elevation of women from a condition [illegible] than [illegible]

There is no evidence that Richard and Saladin ever came face to face [illegible] in the painting by Abraham Cooper, R. A. (1787–1868). By courtesy of the owner, Dr. Robert Bembridge of [illegible]

Magna Carta (June 15, 1215)

TWO STONE portals at the field of Magna Carta at Runnymede where in 1215 the barons forced King John, brother of Richard, to have the Royal Seal of England affixed to the great document, tell [illegible] simple words:

> In these meads on 15 June 1215
> [illegible]
> [illegible]
> [illegible]
> [illegible]
> [illegible]
> Wherein under Ancient and
> [illegible] The
> Administration of Justice
> [illegible]
> [illegible]
> [illegible]
> [illegible]

In recent [illegible] pointed out that the Magna Carta presented no new rights [illegible] was signed by barons resisting [illegible] the earlier Charter of Henry I. They [illegible] that the [illegible] was that of the upper classes and that the barons who forced its signature would have been horrified had they [illegible] that underlings without [illegible] the serfs of a class whose status only [illegible] to that of free peasants.

When [illegible] we will regard Magna Carta as a [illegible] and just government, not as only [illegible] Crown and subject, [illegible] was to be taken in prison [illegible] except by the lawful judgment of his peers. [illegible] in our own times.

Fortunately for posterity King John [illegible] by a united nation. Under the pretense of taking part in a pub[illegible] the barons had assembled at Bury St. Edmunds in Suffolk, where today a stone tablet records the names of those who drew up the petition.

The barons were in a stern mood; they had suffered long from the King's subterfuges and procrastinations. For the first time since the Norman Conquest baronage and commons were united in opposition to the Crown. John agreed to the demands but [illegible] later on to find some way of escape. In Stephen Langton, leader of the barons, the nation found a champion of the old English customs and law against the personal despotism of the kings.

John did not long survive the charter, and his attempts at evasion came to nought. At King's Lynn, in Norfolk, he was attacked by dysentery due to [illegible] in a surfeit of peaches and new cider. He directed that he should be buried at Worcester.

Curiously enough, John, who in his lifetime had flouted the laws of God, desired that he should be laid to rest "in the habit of a monk." "[illegible] itself is defiled by the fouler presence of John," was the judgment of his contemporaries.

The meadows at Runnymede are now a national possession. [illegible] presented to the nation by his widow and two sons as a memorial to Lord Farquhar (Urban Hanbury Broughton), who at the age of 30 went to the United States and there for 25 years engaged in engineering, [illegible] and railroad work. He was [illegible] of the [illegible] people to the English-speaking peoples.

There are four copies of the Magna Carta in existence, two in the British Museum [illegible] Cathedral. It is estimated that 15 million Americans saw the copy that was exhibited at the New York World's Fair.

When I revisited Runnymede soon after V-J Day, this little piece of English soil, virtually within the shadow of Windsor Castle, appeared to me to symbolize the Anglo-Saxon way of life. Magna Carta, the Bill of Rights, the Declaration of Independence, and the Atlantic Charter [illegible] and the world. Runnymede stands for something which [illegible] during the golden age of Victoria, I took for granted—the fundamental rights and freedoms of the individual man.

Forced by the Barons to Yield, King John Set the Great Seal on the Magna Carta at Runnymede

Geoffrey Chaucer (1340?–1400)

GEOFFREY CHAUCER was the first writer to discover and show [illegible] English words. [illegible] *Canterbury Tales* [illegible] power of influence [illegible] as the literary language of England the Midland dialect [illegible] of the Latin and French used by his predecessors and [illegible]

He was, moreover, the first teller of tales to turn aside from the gods and goddesses of Greek and Roman mythology, the incredibly pleasant [illegible] of religious literature and to invest with [illegible] the real human beings who were his friends and neighbors. Of Chaucer's Canterbury pilgrims [illegible] I seemed to [illegible] as if I had supped with them at the Tabard in Southwark.

Because of changes in words, spellings, and pronunciations that crept into English since Chaucer's time, the long [illegible] his verse is not [illegible] with the spirit of his day. Modern scholars, however, have found that if his lines are read as he would have read them [illegible] the rhythm [illegible]

Born about 1340 in Thames Street near the London water front, the [illegible] at the age of 17 he became a page in the court of Edward III and at 19 went with the King to France on one of the expeditions of the Hundred Years' War. He was taken prisoner at the unsuccessful siege of Reims and [illegible] with money from the King's purse.

A few years after his return to England he was made a squire in the royal household, the personal attendant and confidant of Edward III. He married a maid of honor to the Queen. Although records do not [illegible] his wife's [illegible], it is probable that she was Philippa Roet, [illegible] of Gaunt, who for many years was the poet's patron. [illegible] years old, his [illegible] of the French school. His major poem of the period was a translation of the metrical romance, *Romaunt of the Rose*. The next 15 years of his writing took inspiration from the Italian masters, notably Boccaccio, with whose works he was familiar when he was sent about 1372 to ar[illegible] commercial treaty with Genoa. [illegible] of Parliament from Kent, and during the last 15 years of his life he devoted himself to [illegible]. Long since Greek and Latin stories, to be sure, he gave them all English characters and setting.

He held many political appointments, being sent on several missions abroad and serving between times in posts at home. Most important of his home positions was that of Comptroller of Customs at the port of London. By his extensive travels he came to know the world abroad and while serving in political offices in England, he had opportunity to study all the classes of people he gathered into his group of Canterbury pilgrims.

John Dryden (1631–1700), the greatest literary name of the Restoration, wrote of Chaucer:

> In the first place, as he is the father of English poetry, so I hold him in the same degree of veneration, as the Grecians held Homer, or the Romans Virgil . . .
>
> "He must have been a man of a most universal comprehensive nature, as it has been truly observed of him by [illegible] the character of the Canterbury Pilgrims [illegible] of which [illegible] Nor is [illegible] Pilgrims are sufficiently distinguished from each other: and not only in their inclinations, but in their very physiognomies and persons. . . .
>
> "Some of his persons are vicious, and some virtuous; some are unlearned, or [illegible] and some are [illegible] but the ribaldry of the low characters is different: The Reeve, the Miller, and the Cook are several men, and distinguished from each other, as much as the [illegible] Wife of Bath. . . .
>
> "We have our forefathers and great grandames all before us, as they were in Chaucer's time. Their general characters are still [illegible] mankind, and even in England, though they are called by other names than those of monks and friars, and canons, and lady abbesses, and nuns; for mankind is ever the same, and nothing lost out of nature [illegible] everything [illegible]
>
> The *Tales* have been translated [illegible] into modern English but no translation can give the genuine rhythm of the originals. As [illegible] through the world's classics [illegible] fastidious taste, but human, kindly, and full of good humor.

Chaucer's Pilgrims in Their Way to Canterbury Week Away the Time with Merry Tales

Cabot's Discovery of North America, 1497

UNFORTUNATELY [illegible] Sebastian, whose [illegible] him on his voyages. He has become therefore, a mystery man.

Though his voyages are rightly regarded as among the fundamental transactions of human history, the main facts about him are being [illegible] that conducted by Prof. J. A. Williamson. Dr. Williamson tells in his book *The Voyages of the Cabots* the story which he has picked up bit by bit—from a stray fact here and there a letter from Milan perhaps [illegible]

The [illegible] of John Cabot's first voyage come from the [illegible] Indians [illegible] London. On August 23, 1497 [illegible] after the sponsors [illegible] Lorenzo Pasqualigo wrote to his brothers in Venice [illegible] making the first mention of Cabot by name. Further corroborating facts are furnished by Sebastian de Senarega, Marco [illegible] and [illegible] map of Juan de la Cosa, compiled in 1500 and known in Spain at the opening of the 16th century, shows the English exploration of the North Atlantic [illegible] Newfoundland to Long Island.

Dr. Williamson points out that the map is good evidence of the second voyage, for it obviously deals with more than the "hasty reconnaissance of [illegible] concerning the second voyage [illegible] has been [illegible] who [illegible] is believed to have followed the North American coastline from Cape Breton as far south as the Tropics.

John Cabot [illegible] on March 2[illegible], 1476, when he was granted Venetian citizenship. He is presumed to have been born at Genoa, and one authority suggests, since he was little younger than Columbus, that [illegible] played a [illegible]

In the 15th century men's minds were stirring, especially around the shores of the Mediterranean where lived men [illegible] possessed of a practical knowledge of navigation in advance of all others. The theory that the earth was spherical had been familiar as early as [illegible] to the Venetian Peter [illegible] the [illegible] English [illegible] in the 14th century.

In the latter half of the 16th century scholars were certainly familiar with Pierre d'Ailly's *Imago Mundi*, which [illegible] published [illegible] Columbus was persuading Henry VII to aid in his brother's project. The author quoted from Aristotle and Seneca [illegible] the Atlantic westward [illegible] the coast of Asia may be reached." Eagerly studying this work Columbus made marginal notes upon it. Cabot Historian [illegible] said "made himself very expert and cunning in knowledge of the circuit of the world and islands of the same, as by a sea-card and other demonstrations [illegible] Mercia, he must have been acquainted with the work of Marco Polo.

He probably [illegible] Iceland [illegible] the Atlantic [illegible] Bristol has been traded extensively with Iceland and would have been familiar with the saga recording the voyage of Leif Ericsson to Vinland in 1000.

From the entries in Bristol's customs records we learn that on July 15, 1480, John Jay promoted "the first recorded English discovery of unknown lands" [illegible] "In search of the island of Brazil, thought to lie west of Ireland." True, the voyage ended in failure.

In 1498 Pedro de Ayala, the Spanish envoy, reported to Ferdinand and Isabella, "for the last seven years the people of Bristol have sent out every year two, three, or four caravels in search of the island of Brazil [illegible]

After years of patient waiting the great moment in Cabot's life came when in March, 1496, castinas Henry VII granted him the charter [illegible] the project of establishing an English colony [illegible] soon "to sail to all parts regions or coasts of the eastern, western, and northern sea, under our banners, flags and ensigns . . . and to set up our aforesaid banners and ensigns in any town, city, castle, island or mainland whatsoever [illegible]

On May [illegible], Cabot sailed from Bristol and on June 24 reached Cape Breton [illegible] the eastern coast of Asia. He took possession of the discovered land in the name of Henry VII.

The Art Gallery at Bristol gave permission for use of its fine painting by Ernest Board (1877-1934) of the Cabots setting out on their voyage to America.

Henry VIII (1491–1547)

HENRY VIII [illegible] as the "most remarkable man that ever sat on the English throne." [illegible] to obscure his great ability and sagacity, we think of him [illegible] we owe to his foresight.

He is rightly regarded as "Father of the British Navy." Without him the expansion of the English to America would have been prevented.

At the beginning of his reign his chief interests were theology, the New Learning, and his Navy. Convinced that strength on the sea was essential to England, he pored over plans for the expansion of the Navy, [illegible] built dockyards, fortified the southern coast, and drew up the constitution of the Navy. He [illegible] the number necessary for shipbuilding. He knew the speed, the tonnage, and the armament of every ship in his Navy, and from his palace at Greenwich [illegible] the Thames [illegible] "What [illegible] what a layer of [illegible] and goodness, what affection he bears to the learned. . . . All the world here is rejoicing in the possession of so great a Prince. . . . [illegible]"

[illegible] a Welsh family of humble origin [illegible] VIII's [illegible] his six wives, only three of Henry VIII's [illegible] Edward VI died at 15; Mary, daughter of Catherine of Aragon [illegible] died childless at 42; and the [illegible] died at 69.

[illegible] summing up Henry's reign [illegible] "[illegible] of Henry VIII [illegible]"

Henry's passion for a son was his undoing. [illegible] marriage to Catherine of Aragon she had [illegible] twelve [illegible] was later she was delivered of a son, and great was the rejoicing. In [illegible] weeks the [illegible] died.

Misfortune pursued Catherine. Two years later she had [illegible] another son who died no sooner than he had been christened. Peter Martyr ascribes the premature birth of a fourth son to the Queen's [illegible] and the King's [illegible]

Catherine [illegible] Wars [illegible] Spanish [illegible] Ferdinand [illegible] Catherine's [illegible] was well known. Catherine's [illegible] was an [illegible] from the outset; a wife serving her father as Ambassador to her husband! [illegible] Henry was preparing to cast off not only the Spanish alliance but his Spanish wife.

In 1525 Catherine was 40, while Henry was only 34, and the last hope of offspring by her had now vanished. Mary was her only living child. Divorce seemed to Henry the only way out. Henry wanted a son, and he was determined also to be master in his own realm.

In the early years he had been in high favor with the papacy as a loyal son of the Church and a skilled theologian. His book attacking Lutheran heresies had won him much praise in Rome. The English Ambassador had presented Leo X with a copy bound in gold, and as reward Henry had been granted the title of [illegible] Now, however, [illegible]

With the passing of the years, Henry had become more dominating, and desired Clement's sanction for his divorce. Every legal quibble and casuistry was employed by the King. Henry's demand for divorce was [illegible] legates.

There are few more moving pictures than that of Catherine flinging herself at the King's feet and saying: "I have been your wife for years, I have [illegible] I came to [illegible] I was [illegible] that can be alleged against me, I consent to depart well enough; if not, then I pray you [illegible] The appeal met with no response; for the King's heart was [illegible] and he was enamored of Anne Boleyn.

[illegible] Henry [illegible] misfortunes, the [illegible] with the larger question of papal jurisdiction in England. On this vital [illegible] to find the King.

[illegible] by Rome. [illegible] under the control of Henry, [illegible] had the King played his cards; he possessed powers [illegible]

When Barbers Were Blackguards: Henry VIII Gives a Charter to the Barber-Surgeons

William Shakespeare (1564–1616)

THOMAS CARLYLE [illegible] India than the writings of Shakespeare. Recently India gained control of its own destiny, but what Carlyle esteemed the greater treasure still belongs to England.

The current British film industry finds, in *Henry V* and *Hamlet*, that Shakespeare [illegible] the films, the publishers of Shakespeare editions, London's Old Vic and [illegible] for [illegible] Shakespeare [illegible] British [illegible] and [illegible] export industry.

Shakespeare today is definitely an industry, nothing less. One team of German scholars [illegible] studies which [illegible] volumes. If the serious student could digest one of these a day, eleven years of constant study would be required before one could even be said to have surveyed the *select* field covered by Shakespearean scholarship. Of the Bibliography not considered select no one has ventured an estimate.

Dr. Samuel Johnson saluted this phenomenon even as long ago as the 18th century, in prefacing a lazily prepared but still distinguished edition of Shakespeare.

"The poet of whose works I have undertaken the revision was the literary czar of his day, 'may now begin to assume the dignity of an ancient, and claim the privilege of established fame and prescriptive veneration. He may be [illegible] as the test of literary merit.

"Whatever [illegible] every topic of merriment, or motive of sorrow, which the modes of artificial life afforded him, now may [illegible] the scenes which they [illegible].

"The effects of favor and competition are at an end: the tuition of his friendships and his enmities has perished; his works support no opinion with arguments, nor supply any faction with invectives; they [illegible] any other reason than the desire of pleasure, and are therefore praised only as pleasure is obtained; yet, thus unassisted by interest or passion, they have passed through various ages of taste and changes of manners, and as they [illegible] from generation to generation, have received new honours at every transmission."

Three and a half centuries of such popularity have made Shakespeare far more [illegible] than [illegible] a language-spreader. G. H. Wilcock puts it well: "The part of Shakespeare [illegible] that of any other Elizabethan author. Our debt to him in new words [illegible] the tale is not yet told."

Shakespeare was the master of the English language when it was near its best. He, of course, is far more than a language-maker, though that is the readiest aspect in which to emphasize his contribution. As an [illegible] he is the supreme [illegible] master.

The theme of Shakespeare and America is fascinating.

Two years before his last play, *The Tempest*, was produced, Sir George Somers and Sir Thomas Gates had made the voyage to America, and their ship the *Sea Venture* had been wrecked on the coral reefs of Bermuda. The famous charter defining the rights of the Virginia colonies was on the *Sea Venture* and was wrecked on the coast of the Bermudas. [illegible] *The Tempest*.

William Strachey, who was [illegible] of Shakespeare's [illegible], was a manager of the Virginia Company's batteries.

Shakespeare's friend and patron, Henry Wriothesley, the Earl of Southampton, [illegible] the sail line of the Jamestown expedition, for he was a backer of George Weymouth's [illegible] "Wherever [illegible] to relieve a Lime Legger, they will lay out ten to see a dead Indian."

[illegible] Kenneth Rich [illegible] some of his poems to Anne Hathaway as he courts her in her home at Stratford-on-Avon. She was several years older than he, but their marriage [illegible].

Today the largest and richest collection of Shakespeareana in the world is housed in the magnificent Folger Shakespeare Library, Washington, District of Columbia. The $2,000,000 marble building and a large endowment were left by Mr. and Mrs. Henry Clay Folger in trust to the trustees of Amherst College, as a gift to the Nation.

Queen Elizabeth (1533–1603)

BY MISS QUEEN ELIZABETH [illegible] the Elizabethan Age marked for England the most rapid progress [illegible] age of Drake and Raleigh, of Spenser and Shakespeare.

In her reign, too, English scientific investigation had its beginnings [illegible] when it is rubbed, deriving it from the Greek word for amber, *elektron*. [illegible] prospect for England at the beginning of Elizabeth's reign (1558): [illegible] not executed; all things dear; excesses in meat, diet and apparel; devi- [illegible] her realm, having one foot in Calais and the other in Scotland, steadfast enemies, but no steadfast friends. . . . If God start not forth to the helm, we be at the point of greatest misery that can happen to our people [illegible]

In 1589 Hakluyt in his *Voyages* wrote: "Which of the Kings of this land before her Majesty, had their banners ever seen in the Caspian [illegible] Which of [illegible] Consul as yet at Tripolis in Syria, at Aleppo, at Babylon, at Bassara, and, which is [illegible] ships did heretofore ever anchor in the mighty river of Plate? Pass and [illegible] of the South Sea, land upon the Luzones, enter into alliance, amity and traffic with the Princes of the Moluccas, & the Isle of Java, double the famous Cape of Bona Speranza, arrive at the isle of Santa Helena, & [illegible]

The difference between the gloom of the first quotation and the brag- [illegible] Elizabeth was Henry VIII's daughter in many more ways than one, inheriting his anticlericalism as well as some of his illnesses. With [illegible] NEVER [illegible] terror were her stock in trade, which she and Cecil matched against both religious and secular enemies at home and abroad.

Her trumps were her sea captains, but she made the fleet of her [illegible] West [illegible] of [illegible]

[illegible] they [illegible] Age [illegible] Spanish, with [illegible] eyes. The description is that of a contemporary Venetian who failed to understand [illegible] Henry VII.

During the reign of her sister Mary, Elizabeth suffered five years [illegible] 21 [illegible] often have wondered whether she might not end her days like her mother.

While Mary was busy burning heretics at the stake, Elizabeth [illegible] Greek, and Hebrew and could converse in several modern languages [illegible]

Strangely, the Queen who sent her seamen forth to search for the Northwest [illegible] Ocean was one of the least traveled monarchs in history. She never left [illegible] 1574, and when she got there she rendered thanks to Almighty God for her preservation on that long and dangerous journey".

In the town hall of Colchester, England, hangs Arthur A. Hunt's [illegible] to Queen Elizabeth. The replica we use was given by the British [illegible] Louis in 1924.

Francis Drake and the Elizabethan Seamen (1588)

SPAIN hoped by means of the Armada, most powerful fleet ever assembled at the time, to crush once for all "a wicked Princess and a wicked people." But the islanders were buckling on their armor.

On the evening of July 27, 1588, Sir Francis Drake went below deck to read prayers to his ship's company. With the winds of Heaven giving a helping hand the following morning, the bravery and dash of Elizabeth's seamen decisively [illegible] the armor. [illegible] The great [illegible] was given [illegible] English [illegible]

Apart from the superior seamanship of Drake and his men, the English ships were lighter and easier to handle than the great lumbering Spanish galleons. The defeat of the Armada was due in part to the English invention of improved methods of using the wind.

[illegible] when the great moment came and Philip II of Spain made his [illegible] for world mastery, the nation was ready. In the middle of the 16th century, West Country fishermen went in large numbers to the Grand Banks of Newfoundland. Later on, when the Elizabethans sought to discover the Northwest Passage to Asia [illegible] The superior seamanship which defeated the Armada was acquired in the North Atlantic, and the result of this was the expansion of the English-speaking people overseas.

The [illegible] expanded the outlook of the Elizabethans and their successors. On the map of [illegible] will be found [illegible] Frobisher, Davis, Hudson, and others.

But it was not only to the inhospitable north that they sailed in their tiny vessels. Wherever the Spaniards had been, they went, and chief among them was Francis Drake.

A later age has called them mere pirates, but political necessity was the justification for privateering. Elizabeth was determined to keep a war of religion away from English shores; she knew too much of its horrors and was aware that, if war came, her brother-in-law, Philip, would stir up trouble for her at home.

She encouraged her seamen to sail afar. When her enemies burned English Protestants and tortured her seamen, Elizabeth was ready to retaliate to any extent—short of war. Tit-for-tat raids became popular with her subjects. The Spanish treachery at San Juan de Ulúa, in Mexico, gave Elizabeth ample excuse for "singeing the King of Spain's beard" [illegible] in Drake. Drake a burning hatred of Spain that never left him.

Defying [illegible] a tree on the Isthmus of Panama, caught his first sight of the Pacific, and "besought Almighty God of His goodness to give him life and leave to sail once in an English ship on that sea." Probably the incident occurred near the spot where in 1513 Balboa had desired "Almighty God and the Blessed Virgin to give him good success to subdue these lands to the glory of His [illegible]

It was a proud moment when Elizabeth visited the *Golden Hind* at Deptford and on April 4, 1581, knighted the greatest sailor of the age for his feat of circumnavigating the world, "the first man of any nation who has [illegible] (Magellan had taken five to complete his attempt.)

Drake had visited California in 1579, and in sight of the Golden Gate had received the homage of the Indians in the name of the Queen. A stone cross commemorates the fact that he and his men took part in the first service in English, in accordance with the rites of the Church of England, on the Pacific coast of what is now the United States.

Drake paid a second visit to North America in 1586, on his return from the Spanish Main. He touched Newfoundland, and in time to bring back the dispirited colonists of Raleigh's second expedition.

The story of Walter Raleigh belongs to the reigns of both Elizabeth and James. Nothing can detract from the part "the shepherd of the seas" played in forwarding English colonization in North America. His first expedition, under Arthur Barlow and Philip Amadas, sailed in 1584 to spy out the land. Had their landfall been a few hundred miles northward, Raleigh's venture might well have been successful.

His second expedition, in 1585, under Richard Grenville and Ralph Lane, ended in failure. Two years later, undeterred by [illegible] John White.

At Plymouth in the City Museum Art Gallery hangs the John Seymour Lucas picture of Sir Francis Drake receiving the sword handed to him hilt-first by Don Pedro de Valdes, commander of the Andalusian flagship, in token of the surrender of the Armada. The painting is used by permission of the museum authorities and the artist's son.

James I Superintendent Re Revision of the Bible

James I and the Translation of the Bible (1611)

IN THE REALM of English letters the reign of James [illegible] always be associated with [illegible] the translation of the Authorized Version of the Bible and the [illegible] of Shakespeare's genius.

It is strange that so insignificant an individual as the son of Mary Queen of Scots and Darnley should have been placed by destiny on the throne [illegible] James was born in Edinburgh Castle in 1566 and proclaimed King of Scotland at the age of 13 months. He was a delicate, good-tempered, but clumsy boy. His tongue was too large for his mouth, his head was too large for his body [illegible] his legs were rickety.

He became King of England in 1603 at the death of Elizabeth.

[illegible] less personal [illegible] more pleasure-loving, but James had a real appreciation of learning and possessed much [illegible] James IV of France called him "[illegible] Christendom." [illegible] public [illegible] in politics and religion, for "he had no love for either Papal or Presbyterian [illegible]."

The keynote to his reign was his belief in the Divine Right of Kings. Once in the Star Chamber he said: "As it is atheism and blasphemy to dispute what God can do, so it is [illegible] a subject to dispute what a King can do, or to say that a King cannot do this or that." This idea of monarchy contained the germs of the struggle between the King and Parliament [illegible] reign of Charles I.

The decision to undertake the revision of the Bible was made by James at the conference held at Hampton Court in the first year of his reign to investigate "things pretended to be amiss in the Church." The gathering was convened as a result of the Millenary Petition in which the Puritan [illegible] pressed for reform.

They had hoped that the new King, with a Scottish background and upbringing, would be pliable, but they reckoned without their host. James said to the Puritans, "If you aim at a Scottish Presbytery, it agrees with the monarchy as God with the devil." And, turning to Archbishop Whitgift, he added, "If you were out, and these men in, I know what would become of my supremacy—for no Bishop, no King."

It was [illegible] that the [illegible] who presided [illegible] gathering happened to be a scholar. As a young man James had hoped to achieve fame through poetry and prose. At the age of 18 he published *Essays of a Prentice in the Divine Art of a Poesie* and [illegible] Church on [illegible] on theology. He proposed [illegible] translation of the Bible [illegible] by the best classical scholars of the day. When it had been reviewed carefully by the leaders of the Church, it was finally to be ratified by the King himself.

Forty-six revisers were appointed under the presidency of Bishop Lancelot Andrewes [illegible] for whom according to Thomas Fuller, "the King had so great an awe and reverence [illegible] and unsavoury jesting in which he was accustomed to indulge."

The revisers were divided into six committees, [illegible] Oxford, Cambridge, and Westminster. Very wisely James [illegible] the revisers should be chosen without reference to party, and "at least as many Puritan clergy as of the opposite party" were placed on the committees.

The Authorized Version [illegible] Bible read in the Church [illegible] Bishops' Bible, "followed and as little altered as the truth of the original will permit."

In an age of verse that produced little lasting prose, the Authorized Version became the prose masterpiece of the English tongue. Its language is not wholly Elizabethan or Jacobean, but at bottom English of the 14th century. Few will dissent from the verdict of Dr. Richard Garnett in the history of *English Literature* that the English Bible "in its glory is due to no one man or set of men; it grew in the 80 years† of its evolution like a cathedral."

James I's reign covered the sailing from the Thames, on December 20, [illegible] of the [illegible] ships [illegible] *Godspeed* (40 tons), and the *Discovery* (20 tons), under three doughty [illegible] James [illegible] In this year also, nearly 14 years later, the *Mayflower* sailed [illegible]

† Actually, the literary history of the English Bible may be said to have begun [illegible] English translating himself most of the New Testament, published 1388.

The Pilgrim Fathers (1620–25)

THE STORY OF THE PILGRIMS is an epic of the time, the place, and the persons. With the exception of Holland (and it should be remembered that the Pilgrims lived there 12 years before going [illegible] in 1620), the height of [illegible] had not been [illegible] come out of England in the 17th century; and of the nationals of the period [illegible] the French could have [illegible] their identity to brave the hardships of a primeval wilderness.

Only in an entirely new land, free from precedent, far away from the hampering activities of European governments, could these ideas have worked. And [illegible] in the rudiments of democracy could have made it work.

"The plain facts will doubtless lead the candid reader to the conclusion that the Pilgrim Fathers were great in their goodness and wisdom beyond their generation," [illegible] in *The Pilgrim Republic*; "that in an era of superstition they proved not unsuccessfully [illegible] the spirit of progress."

Doubtless many of the adventurers were [illegible] the Pilgrims at all regarded them with dislike. Their ideas differed too much from those on which the *status quo* was based. [illegible] the establishment [illegible] was made. And the Bishops remained in full force.

[illegible] ask from what source profits could be derived in New England. Being told "Fishing," he replied, "So God have my soul, 'tis an honest trade; [illegible]"

Only 70 merchants were found who were willing to take a chance on the Pilgrims. [illegible] had jumped to buy up Virginia stock and others who were even then investing in the East India Company. Indeed, the Pilgrims' capitalization was so far inadequate that they were forced to sell a large amount of butter to pay the port charges on leaving Southampton, thereby laying the foundation for the severe epidemic of scurvy which so decimated the group during their first winter in New England.

No doubt the idlers on the Plymouth and Southampton docks, watching the *Mayflower* and *Speedwell* hoist sail, thought their occupants—as the Puritan Isaac Johnson recorded of his own experience some [illegible] years later—"deluded [illegible] sentence which explains the use of the term "pilgrims":

"[illegible] gently & pleasantly [illegible] the space of 11 years for [illegible] & looked not much on those things, but lifted up their eyes to ye heavens, their dearest mother, and prest thereto."

It is curious that the two expeditions which founded Virginia and New England, respectively, should have been almost equal in numbers—102 emigrants on the *Mayflower*, and 105 on the Jamestown expedition. The district where the three counties of Nottinghamshire, Yorkshire and Lincolnshire meet is [illegible] Brewster, William Bradford and Edward Winslow, Pilgrim Fathers, were born. Nevertheless, the majority of the Pilgrims and their followers came from southeast England.

The story of Leaden's association with the *Mayflower* is only gradually coming to light; there are still many gaps. It is believed he served as pilot on the Thames, and Rotherhithe and Deptford claim that honor. Only in 1904 did a search in the records of the Admiralty reveal the fact that Christopher Jones, the skipper of the *Mayflower*, died in his native Rotherhithe in March, 1622. Several of the crew are said to have been Rotherhithe men, and the most authoritative account of the *Mayflower* records her as lying at Rotherhithe [illegible] with "one suit of worn sails." In all probability she was broken up at Rotherhithe, within sight of the Tower of London.

The voyagers on the *Mayflower* represented a cross section of early 17th-century England with their good qualities and their failings. Their departure caused little comment at the time, but posterity has [illegible] their memory and their deeds. [illegible] will ever remain a [illegible] in the annals of America.

"Embarkation of the Pilgrims," by the American artist Edward Moran, showing the *Mayflower* [illegible] leaving Southampton on August 5, 1620, was presented in 1940 to the U. S. Naval Academy Museum, Annapolis, Maryland, by Paul E. Sutro of Philadelphia.

Dr. William Harvey Shows How Blood Circulates

[illegible]

William Harvey (1578–1657)

WILLIAM HARVEY discovered and announced to the world the circulation of the blood. In 1628 he published his *Anatomical Disquisition on the Motion of the Heart and Blood of Animals.*

As a young man Harvey had traveled widely and had studied at the University of Padua for four years. His biographer, Robert Willis [illegible] "We [illegible] from [illegible] where we [illegible] professional education he received at Padua, Harvey would, in all likelihood, have [illegible] circulation of the blood."

[illegible] School, Canterbury, took his B.A. degree at Cambridge at the age of 19, before setting out for Padua. In the 16th century there was no finer medical school in Europe, and we can picture young and eager Harvey listening [illegible] anatomist, [illegible] professor, in the [illegible]

[illegible] of Dr. Lancelot Browne, [illegible] physician to Queen Elizabeth and took a house in the parish of St. Martin Extra-Ludgate. Unfortunately, [illegible] a Kentish yeoman; his mother, according to the sentiment her son penned for an inscription in Folkestone Church, was endowed with "all the virtues." Aside from the reference in his will to his "deare deceased wife," there is only a casual mention of his spouse as the possessor of a pet parrot, which must also, if we may infer so much from the pains he takes in specifying its habits and accomplishments, have been a favorite of Harvey's.

Within five years of his marriage (no doubt his father-in-law's influence was useful) Harvey was appointed physician to St. Bartholomew's Hospital [illegible] only such medicines as should "doe the poore good," without regard to the pecuniary interest of the apothecary. Seven years after his appointment he began the famous series of lectures at the College of Physicians, in Knightrider Street, near St. Paul's.

In these lectures he first made public his ideas on the circulation of blood. Ideas which had [illegible] explained how the heart [illegible] of the entire human frame. The heart sends the blood, he asserted, to the lungs where it is purified by the air we breathe, and then drives it by means of the arteries throughout the entire system.

Harvey did not publish his book until 12 years after he had made the [illegible] discovery. [illegible] ideas, selected Harvey as one of his "physicians extraordinary," and Charles I appointed him court physician.

According to John Aubrey, Harvey's discovery gave "a double check to his professional prosperity . . . 'twas believed by the vulgar that he was [illegible]."

After the surrender of Oxford, Harvey returned to private life and passed most of his time with one or another of his brothers in the City of London, at the "suburban village of Lambeth," or at Roehampton.

A picture of Harvey in earlier life is given by Aubrey, who tells us that he was wont to visit his patients "on horseback, with a foot-cloath his man following on foot, as the fashion then was.

"[illegible] (like wainscot) complexion; little eye, round, very black and full of [illegible] then was, which he would be apt to draw out upon every occasion"—[illegible]

[illegible] used to drink his favorite beverage with his brother Eliab. He evidently paid much attention to the making of his coffee, for in his will he specially leaves his "coffey-pot" to Eliab. To his friend, Dr. Scarborough, he left his "silver instruments of surgery and his best velvet gown."

When we read the story of Harvey's life, we have constantly to remind ourselves that he was an Elizabethan—he was 25 when the Virgin Queen died. Even after the death of Elizabeth the belief in witches was widespread. Harvey had the satisfaction of saving the lives of four poor Lancashire women accused of witchcraft, who had been sent to London for trial. He superintended their physical examination by ten midwives and seven surgeons and found that there was [illegible]

Cromwell (1599–1658)

ERNEST BARKER gives in his *Oliver Cromwell and the English* [illegible] perhaps the greatest we have had—of the genius of English Nonconformity [illegible] national life. He was the expression of the great Free Church movement [illegible] fundamentally—because the two things are intimately and irrevocably [illegible]

We may regard Oliver Cromwell as the last of the great Elizabethans. Such was his fame in Europe at the time of his death that Clarendon said: "Never [illegible] England's friendship so desirable or her enmity so much feared."

Cromwell [illegible] the founding of English colonies in North America [illegible] the sailing of the *Mayflower*, and the great Puritan migration. Under Cromwell, as Lord Protector, the gulf between Old England and New England were [illegible]

Cromwell [illegible] Boston, Massachusetts, "I am a poor weak creature and not worthy of [illegible] people." Cromwell certainly held New England in his thoughts and [illegible]

Oliver was born at Huntingdon, in the heart of England, and finished his studies at Cambridge. He matriculated at the age of 17 at Sidney Sussex, regarded by Archbishop Laud as a "nursery of Puritanism" [illegible] his studies, Edmund Waller asserted that he was "well read in the [illegible] Wars, Protector, he [illegible] famous for his exercise on the fields than in the schools, being one of [illegible] boisterous sport or games."

In 1636, on the death of his uncle, a farmer, to whose estate he succeeded, Cromwell moved to Ely. While working on his farm he was thinking deeply, and, as he tells us, after a long period of religious depression he was finally "given to see light."

As late as January, 1643, he was still only a captain of a troop of [illegible] Civil War had progressed [illegible]

Cromwell threw his energies into the task of military organization in East Anglia, and before long the pious countryfolk were turned into [illegible]

As Mr. [illegible] Cromwell's troopers [illegible] troubers in the famous phrase. God made them as stubble before [illegible] army. Henceforward he was not only a great warrior but a political leader, known as "the great Independent."

[illegible] recruited chiefly in East Anglia, the Midlands, and London, while the King, Charles I, drew his strength of support from the West Country, Wales, and the North. With the fall of Oxford (June, 1646) the war was virtually over. The lenient terms offered to the enemy proved that [illegible]

Having refused the title of King, Cromwell was installed as Protector in December, 1653. In all he did he was convinced that he was fighting "the Lord's battles."

Cromwell [illegible] he had failed to give stability to his rule. In addition to his political [illegible]

After the terrible winter of 1657-58, when a malignant fever raged throughout the land, Cromwell [illegible] He died on September 3, the anniversary of two of his greatest victories.

[illegible] a victorious general at the head of his troops after the Battle of Marston Moor. The canvas is owned by the town of Burnley, Lancashire. According [illegible] details of [illegible] and Lutherian objects.

John Milton (1608–74)

JOHN MILTON, the one great literary figure of the Puritan Age, produced some of the most exalted poetry ever written and in prose [illegible]

In his time nothing could be published legally until it was endorsed by the official censor, and many books were suppressed merely because they did not please an official who owed his position to political favor. Milton [illegible] the evil of censorship in his *Areopagitica*. John Fiske, historian, calls it "one of the [illegible] English literature." [illegible] November 1644, the world owes the preservation of many great works that almost certainly would have [illegible]

Milton's father had hoped that his son would take holy orders when he finished his studies at Cambridge; but the keynote to Milton's outlook on life was his independence of thought, and, finding in no sect the marks of the true church, he prayed to God alone without [illegible] help. [illegible]

With a mind extraordinarily rich in classic learning and highly skilled in music, the young poet returned to his father's estate at Horton, a sylvan Buckinghamshire village close to Runnymede. There in six years [illegible] poems.

Milton set out in April, 1638, soon after his mother's death, to seek further [illegible] Wherever he went, he made friends. His brilliant scholarship and his remarkable personal beauty won acclaim everywhere. Of interest, in view of his subsequent loss of sight, is his visit to the blind and aged Galileo.

News of the break between the King and Parliament caused Milton to give up his travels and literary ambitions and return to England. [illegible]

For 20 years he turned aside from poetry to write prose denunciations and arguments in support of the Puritan cause. His *Tenure of Kings and Magistrates* [illegible] of 1649 because they had sent a King to the scaffold.

Milton was appointed Secretary of Foreign Tongues in the new government, and from that time until the end of the Commonwealth he led the people in thought as Cromwell led them in action.

In poor health at the time of his appointment, Milton had already lost the sight of one eye. When he undertook to write a reply to Claude de Saumaise's *Royal Defense of Charles I*, he knew that the result would be the loss of sight in his remaining eye. Nevertheless, he was ready to [illegible] as he feared, he became completely blind.

[illegible] of Charles II. He had lost his property at the Restoration and had to go into hiding to escape being put to death. He was actually taken [illegible] ment of large fees. To earn a living, he conducted a school. For *Paradise Lost*, his great epic on the fall of man, he received but £10. One of the first events in the new reign was the burning of two of his books by the public executioner.

[illegible] *Paradise Lost* and *Paradise Regained* were Milton's [illegible] poems. *Lycidas*, written in memory of a college friend, is regarded by [illegible] shorter [illegible] *Il Penseroso* [illegible] favorite.

In 1643 he had married Mary Powell, daughter of a Cambridge friend, [illegible] Whatever the cause, within a few weeks Mary fled to the parental roof and ignored the poet's repeated pleas to rejoin him.

With the defeat of Charles I at the Battle of Naseby, the Powell family [illegible] *The Doctrine and Discipline of Divorce*—Mary appeared suddenly kneeling at her husband's knees to implore forgiveness. Her request was granted, and she went back to [illegible] Mary died in 1653. A few years later Milton married a second time and in 1663 a third.

[illegible] in Bunhill Row, and for a brief sojourn at Chalfont St. Giles, whither he went to escape the plague. His daughters [illegible] to him and took his dictation of his later poems, as shown in our illustration. The painting, by the Hungarian Michael von Munkacsy [illegible] to which it was given in 1879 by Robert Lenox Kennedy.

Daniel Defoe (1661?–1731)

THE DEFOE'S [illegible] discovery of two features used to this day—the interview and the lead editorial. He was in fact the first real news reporter in the modern sense. With a remarkable "nose for news" he collected stories wherever he went.

Daniel Defoe's masterpiece, *Robinson Crusoe*, is one of the few books in any language to remain popular for more than two centuries. At the time of its publication in 1719 it went through four editions in as many months, and new and ever more elaborate editions have been coming out at frequent intervals ever since. One of the more recent is illustrated with paintings by the late N. C. Wyeth, American artist, whose picture of Crusoe's raft is reproduced in our plate. The story has been translated into virtually all modern languages.

Despite its dime-novel plot, loresome moralizing, and total lack of love interest, it stands out as one of the most vivid and gripping adventure tales ever written. It is not, however, as some enthusiasts have called it, the first English novel; for it does not, like a true novel, subordinate incident to character portrayal. In it the exciting adventures are of paramount importance, and observations on the hero's character are confined to plain straights.

The story is founded on the experiences of the sailor Alexander Selkirk, who, after being marooned for five years in the Juan Fernandez Islands off the coast of Chile, was picked up by a British vessel and brought back to England in 1709. According to Selkirk's own statement, he lent his notes to Defoe, but the shifty Defoe denied this, averring that he had written the story of Crusoe in 1708 before Selkirk's return. Defoe's romance—incidentally, it covers 35 years instead of the five of Selkirk's experience—reads nevertheless as if it had been taken right out of a sailor's log.

As proved in the *Journal of the Plague Year* and *Memoirs of a Cavalier*, Defoe had the newspaper reporter's knack of giving apparent eye-witness details of all events and scenes he recorded, even though he was describing things he had never seen. He doubtless borrowed from Selkirk's notes, but most of Crusoe's adventures were pure fiction.

The chief charm of the story lies in the fact that it is absolutely true to life. Putting himself in the place of an English sailor marooned on a desert island, and luring the reader to do likewise, Defoe made Crusoe live like an Englishman wresting from harsh Nature with his own hands all the things necessary to comfortable living. Rousseau called the book the best treatise on education ever written.

Son of a London butcher named Foe, the author of *Robinson Crusoe* retained his family name until he was about 40 years old, when he began to sign himself Defoe. He lived a varied and turbulent threescore and ten years, passing from poverty to riches and back to penury, from wealthy tile manufacturer to penniless hack writer, from jailbird to popular newspaper editor, from fugitive from justice to secret agent of the Crown. Whether Whigs or Tories were in the ascendancy, he usually contrived to find employment with the ruling power; but his duplicity was made public at length.

He published in 1702 *The Shortest Way with the Dissenters*, a violently satirical pamphlet supporting rights of free churches against the "high flyers," as he called Anglicans and Tories. So characteristically realistic was the satire, recommending that all dissenting ministers be put to death and their followers exiled, that both factions took it literally. Defoe was promptly arrested for seditious libel and sentenced to be fined, exposed in the pillory for three days, and imprisoned for an indefinite term.

While [illegible] copy out of his misfortune, he wrote his doggerel *Hymn to the Pillory*, which begins:

> Hail hieroglyphic state machine,
> Contrived to punish fancy in.

and had it scattered over London as a handbill. It won him instant acclaim and brought about his transfer to Newgate Prison, where forthwith he started a popular newspaper.

Until he was nearly 60 years old, he confined his writing principally to political pamphlets, satire in both prose and verse, and polished essays on economics and government.

Defoe scored with *Robinson Crusoe* a success that made him famous and well to do. He wrote stories from then on with amazing rapidity—*Captain Singleton*, *Duncan Campbell*, and *Memoirs of a Cavalier* in 1720; and in 1722 *Colonel Jack*, *Moll Flanders*, and *The Journal of the Plague Year*.

No other British writer save perhaps Sir Walter Scott has approached Defoe in volume of literary output. In his more than 200 works there is an astonishing variety of theme and treatment; but all are written in the newspaperman's simple narrative style, and all are distinguished for intense realism.

Jonathan Swift, brilliant contemporary of Defoe, published his original *Gulliver's Travels* in 1726.

"I Was a Mile or Thereabouts, My Raft Went Very Well"

[illegible]

Christopher Wren (1632–1723); Robert Boyle (1627–91)

CHRISTOPHER WREN has been called the English Leonardo da Vinci. Besides being our architect of greatest achievement, he was philosopher, astronomer, prolific inventor, and skilled mathematician.

He will always be remembered with gratitude for the part he played in rebuilding London after the Great Fire which swept away the city as it was in Shakespeare's time.

America as well as England benefited by his work; for he designed the oldest academic building in the United States, at the College of William and Mary, Williamsburg, Virginia, and his ideas largely influenced William Penn's plan for Philadelphia.

It has been suggested by some scholars that the radiating street plan adopted for Annapolis, Maryland, and incorporated into the L'Enfant plan for Washington, D. C., owed its inception to the tradition of Wren's work.

Because of delicate health, Wren received his early training at home. His father, the rector of East Knoyle, Wiltshire, possessed some skill in designing buildings; but the son at first showed no desire to take up architecture as a profession. He was professor of astronomy at Gresham College when Charles II induced him to turn his back on the studies of the sky and become assistant surveyor general.

As a child Wren possessed exceptional brain power. When he was 15 learned mathematicians conversed with him as with an equal.

His versatility was amazing. John Evelyn tells us of a visit to Oxford, where he found "that prodigious young scholar" at work on the production of "a pavement, harder, fairer, and cheaper, than marble."

The Great Fire which raged from September 2–6, 1666, and destroyed "Shakespeare's London" gave Wren, as virtual surveyor-general, his great opportunity. On September 12 almost before the embers had ceased to glow, Wren laid before the King his plan for the rebuilding of the city—perhaps the greatest conception of his life.

To this day Londoners are paying for the sins of omission of their forefathers, who failed to seize so unique a chance of making the capital the best laid out city in Europe. Wren introduced entirely new ideas in town planning; his scheme provided for a series of wide streets radiating from a central space.

Only a Napoleon would have been able to force through so great a project. Alas, it was too much to expect of a generation that had suffered from the Civil War, the Great Plague, and the Great Fire. Only a few of Wren's proposals were carried out.

London had to put up with second best, and Wren threw himself with enthusiasm into the tremendous undertaking of rebuilding St. Paul's, 50 parish churches, 36 halls of city companies, and much else besides. For the task of planning and supervising the building of St. Paul's and the churches he asked a stipend of only £500 per annum, preferring public service to any private advantage.

His greatest year was 1669, for he was involved in the plans for St. Paul's and with the designs of 17 churches. As late as 1710, at the age of 78, he still had himself pulled up in a basket to the dome of St. Paul's, and there he would sit for hours supervising the work. He was 90 when he crowned his career with the tower of St. Michael's.

Wren passed most of his time during his last years in a house at Hampton Court.

He was accustomed to drive to St. Paul's from time to time, and while sitting under the great dome to reflect upon the many hopes and disappointments involved in the completion of his mighty undertaking.

On his last visit, in his ninety-first year, he caught a chill. His servant found him after his return home apparently asleep in his chair; the great heart of Christopher Wren had ceased to beat. It was a peaceful end for the "loving, gentle, modest" genius whom contemporary testimony leaves spotless.

On his tomb in St. Paul's his successor caused an epitaph to be engraved, ending:

"Si monumentum requiris, circumspice." (If you require a monument, look around.)

Contemporary with Wren was Robert Boyle, who has been called the founder of modern chemistry. In the English-speaking world he is credited with discovery of "Boyle's law"—that the volume of a gas varies inversely as the pressure exerted on it in a closed chamber at constant temperature. A son of Richard Boyle, Earl of Cork, he and Wren were leaders in founding the Royal Society. Boyle studied the part played by air in the propagation of sound, the expansive power of freezing water, crystals, electricity, and specific gravities and refractions. During the reign of Charles II he helped raise Britain to a foremost place among European nations in experimental science.

Though busy with science, Boyle studied enough theology to earn church orders had he elected. He read Scriptures in Hebrew, Greek, and Syriac and bought costly Biblical translations. His will provided for the Boyle lectures to prove Christianity against unbelievers, but forbade mention in them of controversies between Christians.

Sir Christopher Wren Shows Charles II Plans for Rebuilding London

Isaac Newton (1642–1727)

WAS THERE EVER ANOTHER story as that of young Isaac Newton, the schoolboy with no liking for books, whose mind ten years later was wandering with complete assurance among the problems and enigmas of the heavenly bodies, and who was to achieve thereby immortal fame?

He made known to a world which still believed in witchcraft the laws of gravitation, and by his experiments with the spectrum discovered that light consists of rays differently refrangible. His amazing intellect worked out as if by magic astronomical problems that had puzzled the astronomer Edmund Halley.

Isaac Newton, a puny and premature infant, was born on Christmas Day at Woolsthorpe Manor near Colsterworth, Lincolnshire, in the year that witnessed the outbreak of the Civil War between Cavalier and Roundhead. Newton's father, a substantial yeoman farmer, died before his son's birth. The house is now preserved as a national heritage, thanks to the Pilgrim Trust, founded by the American philanthropist, the late Edward S. Harkness.

Three years after her husband's death Newton's mother married the Reverend Barnabas Smith, whose parish lay in another part of the county, and little Isaac was left in the charge of his grandmother.

At the age of twelve he was sent to Grantham Grammar School, a shy and retiring boy. When a school bully taunted him, however, the unexpected happened. Young Newton thrashed the bully. That scrap was the turning point in his career. Within two years he was head of the school.

At sixteen he left school to become a farmer like his father, and to look after the family estate. Fortunately for mankind, Isaac did not like country pursuits. He was sent back to school to prepare for Trinity College, Cambridge. There his interest in mathematics was quickened by Isaac Barrow, whom he was destined one day to succeed.

When the plague brought learning at Cambridge to a standstill, Newton, then 22, returned home and in two wonder years began his series of great discoveries in physics.

"I began," he wrote, "to think of gravity extending to the orb of the Moon . . . having thereby compared the force requisite to keep the Moon in her orb with the force of gravity at the surface of the earth, and found the answer pretty nearly. All this was in the two plague years, 1665 and 1666, for in those years I was in the prime of age for invention, and minded Mathematicks and Philosophy more than at any time since."

Prof. Sherwood Taylor says that in these years Newton arrived at the binomial theorem, the differential calculus (or "fluxions" as he called it), the principle of universal gravitation, and the connection of color and refraction, although he did not publish his discoveries for many years.

Halley visited Newton at Cambridge and reported to the Royal Society that Mr. Newton had showed him a curious treatise concerning motion, and that he had requested Newton to communicate with the Society. This Newton did the following year.

The incident was the beginning of the Royal Society's interest in Newton's monumental work, *Philosophiae Naturalis Principia Mathematica*, which was printed by Samuel Pepys, then president of the Society.

His most important contribution to scientific thought was his exposition of the plan of the solar system and the mathematically exact way in which it was to be understood. Copernicus was responsible for the heliocentric system in 1543. Galileo "had given visual evidence that supported this view." Kepler "had discovered the eccentricity of the planetary orbits and the laws that govern their motions." Newton drew inspiration from all these seers and in *Principia* completed their work.

At Cambridge he had delivered the lectures describing his optical experiments, made on a prism he bought at Stourbridge Fair in 1666—the discoveries which led to his theory of light.

When Newton gave up his Cambridge professorship, he came to live in London, and, in 1703, he was elected president of the Royal Society. This position he filled with great profit to it until his death 24 years later.

His investigations into the order of Nature deepened his reverence for God. At the height of his fame he modestly said: "To myself I seem to have been as a child picking up stones on the sea-shore and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, while the great ocean of truth lay all undiscovered before me."

Although Newton's three great laws of motion are still as accurate as ever for the purposes of our workaday world, Einstein's theories of relativity have altered somewhat our concept of the universe as a whole. Newton's laws showed the universe to be a vast interlocking machine which obeyed the universal "force" of gravitation. Space was a fixed frame of reference through which motion of a heavenly body could be measured absolutely, as a ship's motion can be measured through the sea.

Einstein has shown that nothing in the universe is fixed and immovable, that the motion of any one body is merely relative to other bodies which also are in motion.

By Means of a Prism Held in Front of the Sun, Newton Discovered Secrets of Light

The Mother of Parliaments (1295)

THE GREAT CONSTITUTION [illegible]

It is strange that Simon de Montfort, the Earl of Leicester, who [illegible] He championed the rights of the English people against Henry III, and insisted that the King return to France the Poitevin favorites [illegible]

De Montfort is therefore venerated as one of the founders of our [illegible] The first clear [illegible] is found in provisions of the "Provisions of Oxford" in 1258, which ordered two knights from each [illegible] and representatives [illegible] and clergy at Oxford.

[illegible] of De Montfort. This assembly, known as the "Model Parliament," represented King, Lords, and Commons, and may be said to be the precursor of Parliament in its present form.

In early times the King was advised by a Council of persons of [illegible] ment formed what is known as the "Crown." But of the Council gradually emerged the Parliament; but only by slow degrees did it become first the colleague of the sovereign, then later in conflict with [illegible]

[illegible]

[illegible] of the monks of Westminster, which still stands and may be regarded as [illegible] to St. Stephen's Chapel. In St. Stephen's it met until the great fire of [illegible]

[illegible] Henry VIII [illegible] legislation [illegible] got out of hand—the Stuarts did not possess the adroitness of the Tudors. The Long Parliament (1640-53) overhauled the English Constitution and introduced such reforms as a regular session of Parliament and the prohibition of duties without the consent of Parliament [illegible]

Many of the debates in Parliament are naturally of deep interest to Americans. Since the days of Henry VII such subjects have been discussed within its walls as the fishing rights off the Newfoundland coast, the quest for the Northwest Passage, the settlement of Virginia [illegible] Amsterdam, the triumphs of the Seven Years' War, the stages of the [illegible] can cooperation in two World Wars.

[illegible]

Some of the most eloquent speeches ever made at Westminster were before and during the American War; Burke has described how "the [illegible] when, because of ill health, he absented himself at crucial moments. Chatham had a great following and, when he emerged from the House, [illegible]

Chatham's last, and unexpected, appearance in the House of Lords was on April 7, 1778. Copley's portrait is so accurate in detail that [illegible] remaining seated while the others stood. It was a dramatic scene [illegible] the large wig, but the eyes flashed with erstwhile fervor. He was helped to his feet by his son, William Pitt, and began to speak almost inaudibly, but he soon warmed to his theme—the future of Anglo-American relations [illegible] it with his eyes lifted to Heaven, he solemnly thanked God that he [illegible] Thirty-four days later the great statesman breathed his last.

[illegible] "Death of Pitt" by the American, John Singleton Copley (1738-1815).

William Hogarth (1697–1764)

THE TRAGEDY of William Hogarth, one of the greatest creative [illegible], was that the critics of his day [illegible] their homes [illegible] painting [illegible] representing [illegible] taste.

[illegible] died in London [illegible] up his art. Supremely interested in life, [illegible] in his pictures a set of [illegible] which everyone could [illegible]. His idea, as expressed in his own words, was [illegible] similar to representations of the stage.

Hogarth was [illegible] reformer. His purpose was to portray the life [illegible] and tragedy. With great skill he put on canvas scenes from the life of the harlot, the snob, [illegible]. He has been called with some justice the father of cartooning, for many of his [illegible] representations have extraordinary [illegible].

Equipped with [illegible] he wandered [illegible] as he went. His [illegible] and [illegible] when he returned to his studio, he merely [illegible] the things he had seen.

[illegible] Marriage-à-la-Mode, A Harlot's Progress, and A Rake's Progress. [illegible] Hogarth was too retentive; he was apt to overload his pictures [illegible] pictures in which a group of portraits is held together by a slender dramatic or [illegible] Some of the Dutch masters had quite the liveliness of Hogarth.

His father was a hedge-row schoolmaster from Westmoreland, who [illegible] William, was apprenticed to a [illegible]. At the age of 23 he set [illegible] plenty of work.

[illegible] pencil, the art of mimicry, and an eye for the absurd. He was [illegible] aggressive and, despite his [illegible] poverty, [illegible] world.

He subsequently wrote of these early days: "I remember the times when I [illegible] sword and a bay wig, and sallied out again with the confidence [illegible] who has 10,000 pounds in his pocket."

It was a lucky day for William when he entered the little academy for the study of painting maintained by Sir James Thornhill, near his [illegible]. Before long William had won the affection of Sir James's only daughter, "a [illegible] young, and stately young woman with blonde tresses."

Sir James certainly would not have approved of the marriage of his daughter [illegible] young man [illegible] but [illegible] their [illegible] affection [illegible] and they were ready to elope.

[illegible] William were married [illegible] secretely in the church on the green of the village of Paddington. Before his death four years later, Sir James was reconciled to the young couple, who had established themselves in Leicester Fields, then the artistic center of London.

Jane, patient, cheerful, loyal, and unselfish, was well suited to be the wife [illegible] a nursing grievance that his worth was not appreciated. They passed an eminently happy married life of 35 years together, a devoted couple.

Hogarth's end is of special interest to Americans. The painter now [illegible] in Leicester Fields and was overjoyed by the receipt of a letter from [illegible]. He at once made a rough draft of his reply, but the effort exhausted him, and he retired early to rest, [illegible] afterward the left rang loudly. He was found speechless on the floor. In his [illegible]

[illegible] hangs the original Hogarth painting, "Hogarth's Life School [illegible]," [illegible] our illustration is taken.

John Wesley (1703-91)

JOHN WESLEY and his brother Charles. John was the 15th child [illegible] Rev. Samuel Wesley and his wife Susanna [illegible] was the 19th child of Dr. [illegible] [illegible] organization [illegible] the efforts of which [illegible] the Methodists.

Though he never broke with the Church of England, the elder Wesley was the real organizer of the new sect. Charles was the poet of the Revival, writing more than 6,000 hymns, many of which are [illegible] "Lover of My Soul," "Hark, the Herald Angels Sing," and "Love Divine, All Love Excelling."

[illegible] Wesley [illegible] "the spiritual adventure" which resulted in the establishment of Methodism. It is with John, however, that its rise will always be associated, for he was its mainspring and heart.

A few months after [illegible] preacher George Whitefield, joined in the attempt to live by method, hence Methodism. The requirements of membership were prayer, [illegible] to the poor. The young men were nicknamed "Bibleites" or "The Holy Club," or the "New School of Methodists."

In 1735 John and Charles Wesley were taken to America by General [illegible] and squabbling ensued. John had an unfortunate love affair and returned to England in 1738. On his way home he wrote, "I went to America [illegible]

The real conversion of John Wesley took place on May 24, 1738, [illegible] assert. "It is scarcely an exaggeration to say that the scene which took place at that humble meeting in Aldersgate Street forms an epoch in English history."

Prior to that moment as great Wesley felt that he had been only half [illegible] this event came not only the establishment of Methodism in Great Britain and America, but, thanks to his ministry and example, the Church of England, spiritually then at a low ebb, was revivified, and there emerged a wave of idealism the effects of which are still felt.

The New Room [illegible] John Wesley began his ministry in 1739, still stands in Bristol. Providentially it escaped the devastation caused all around it by Nazi bombs. In the little courtyard is the statue of John Wesley on horseback.

[illegible] mostly on horseback, visiting almost every village and hamlet in the [illegible] Wesley's Chapel [illegible] Water Street [illegible] a travel-stained pilgrim.

For Wesley every moment of the day from 4 a.m. till late at night had its duty, and he did most of his reading as he went from place to place on horseback. He [illegible] that can be conceived," withstood the strain for 40 years remains a mystery. When he was nearly 70, he wrote: "Near 30 years ago, I was thinking 'How is it that no horse ever stumbles while I am reading?' [illegible]

As long as Wesley [illegible] preaching at Kilkhrist to so large a congregation that he was obliged to go out of doors despite the rain.

[illegible] the last sermon he ever delivered was in the dining room of a friend at Leatherhead, on February 23, 1791, within ten days of his death.

[illegible] When John was five years old, the house burned down and the future religious leader had a miraculous escape, which he always spoke of as an act of Divine Providence. The church, reached by a long flagged pathway guarded by a row of pollarded lines on each side, remains as it was in Wesley's day. From the churchyard I looked two years ago across waving fields of ripening grain, golden in the sunshine, [illegible]

To Reach the Multitudes, John Wesley Preached Many of His Sermons on the Streets

James Watt (1736–1819)

AS A BOY in the fishing town of Greenock, Scotland, James Watt, who was destined to give to the world the modern steam engine, was too sickly to attend school regularly. He was permitted, therefore, to pursue his own studies and experiments. Furthermore, he [illegible] more [illegible] in natural science. The familiar story of his [illegible] study of the lifting power of steam under the lid of a tea kettle is told by his cousin [illegible] Mrs. [illegible] memorandum written in 1798.

Son of a well-to-do carpenter and dealer in marine stores, Watt had excellent opportunities to learn the use of tools. He became so skillful that no workmen in the village [illegible] Wee Jamie [illegible] fingers an' mutcher in [illegible] They little dreamed, however, that the ideas developing in the mind of this boy would one day transform their little village on the Clyde into a great port and shipbuilding city where [illegible] and other steamships were constructed.

Watt's father had planned to send his son to Glasgow University to prepare for a professorship in physics, but financial losses put an end to that ambition. In 1755, at the age of 19, young Watt [illegible] 400-mile horseback trip to London where he was to learn the craft of instrument making.

After learning the trade, he obtained an appointment as mathematical instrument maker at Glasgow University. Watt possessed [illegible] manly strength. He was [illegible] with [illegible] were [illegible] or assembling steams.

After seven years of hard application Watt was asked by the authorities of Glasgow University to repair a Newcomen engine, which [illegible] never [illegible] satisfactorily. This he accomplished successfully, and in the process was impressed by the urgent need for economy in the use of steam. His greatest invention was therefore based on the knowledge that steam [illegible] when [illegible] heated, expands more than 1,600 times and can [illegible] a practically "rarefied cylinder by means of a small tube."

Watt did not invent the steam engine—the use of steam to do work dates from the experiments of Hero (Heron) of Alexandria in the second century B.C.—; but he improved it. Drawing on the discoveries of his predecessors, he developed them and made the engine quick- [illegible] powerful [illegible] It was [illegible] not until 1781 was it made to turn a wheel. In 1782 Watt solved the problem of [illegible] rotary motion.

In 1825 George Stephenson, son of a Northumberland [illegible] who was [illegible] pumping engine at a pit near Newcastle, England, improved Watt's engine and developed and ran one of the earliest locomotives. Stephenson and his son lived to see their [illegible] transportation.

On [illegible] Watt wrote: "One Sunday morning when I had gone for a walk in the Green of Glasgow, the idea occurred to me that, as steam is an elastic vapor, it would expand and rush into a vacuum. The separate condenser would take care of the exhaust, and the steam jacket keep the cylinder hot. I rushed back to the university and [illegible] Dr. Robison [illegible] and [illegible] I [illegible] letting [illegible] a boiling hot cylinder, and not waste a single particle."

[illegible] Watt's steam engines [illegible] perfected [illegible] Birmingham with the help of John Roebuck, and later of the firm Watt & Boulton. Other [illegible] were interested, [illegible] The decade before the Declaration of Independence witnessed the invention of the spinning jenny of James Hargreaves, the weaver (1764), the [illegible] of Richard Arkwright [illegible] water [illegible] and the "mule" of Samuel Crompton, the weaver (1779). Without efficient steam, some [illegible] would have been [illegible]

Largely through the experiments of [illegible] Benjamin Franklin [illegible] overcome [illegible] world [illegible] Watt [illegible] prizes the Industrial Revolution, which [illegible] the workshop of the world—a position it held for nearly a hundred years.

Watt's later years were passed at Heathfield, within 20 minutes' walk of the Soho Foundry, where he and his efficient business partner, Matthew Boulton, had made their fortune. In the background there was always, as refuge, his workshop in the garret, with his bench, his foot lathe, and the stove on which he could melt metals.

When Heathfield was pulled down in 1927, his workshop, just as he left it, with jobs unfinished, was presented to the [illegible] It is now one of the prized possessions of the Science Museum in South Kensington.

[illegible] by Marcus Stone, R.A. (1840–1921) is privately owned.

James Wolfe (1727–59)

ON SEPTEMBER 13, 1759, General James Wolfe took Quebec from the French General Montcalm and by his victory insured the supremacy of the English-speaking race in North America. Both Wolfe and Montcalm lost their lives in that battle, which some historians call the most important ever fought on American soil.

Born in 1727 in the village of Westerham, Kent, Wolfe became a soldier before he was fourteen; his commission as second lieutenant in his father's old regiment, the Marines, was signed by George II in 1741. Soldiering was in his blood. At the age of 16 he fought at Dettingen, where his horse was shot under him and, as he tells us, he had "to do the duty of an adjutant all that and the next day, on foot in a pair of heavy boots."

Wolfe, who was tall and slight and had reddish hair, admitted that he was "a whimsical sort of person." As a commanding officer he was just, although a believer in discipline. His nature was a mixture of method and dash. All through his short career he was an omnivorous reader of military history. He successfully developed a form of guerrilla warfare in the capture of Louisburg and smilingly explained his tactics by saying he had learned the tactics from the reading of Xenophon.

Once when the Duke of Newcastle ran to tell George II that Wolfe was mad, the king, endowed with shrewdness in addition to a sense of humor, remarked, "Mad is he? Then I hope he will bite some of my generals."

On Wolfe's return to England after the capture of Louisburg, Pitt offered him the command, with the rank of major general, of the expedition to be sent up the St. Lawrence, and he selected Guy Carleton and Isaac Barré as his chief staff officers. Barré at the time of the American Revolution, 20 years later, championed the cause of the Colonies in Parliament.

Wolfe sailed from Spithead on February 14, 1759, to achieve a feat that would change the destinies of a hemisphere. Three armies were to converge on eastern Canada, and Wolfe's part was to capture Quebec, a practically impregnable fortress, thanks to its towering position on the St. Lawrence. Not only natural difficulties of great magnitude confronted him; but, like Napoleon in Russia, he was fighting with "General Winter" for the St. Lawrence becomes icebound early.

Time was the dominating factor. The weeks passed; Wolfe made two attempts, but they ended in failure. He fell ill and was despondent. As late as August 19 the omens were unfavorable, and news of his illness spread dismay among his men. There were even rumors that he was dying.

"I know perfectly well you cannot cure my complaint," he said to his surgeon, "but patch me up so that I may be able to do my duty for the next few days."

On August 31 he wrote to his mother: "My antagonist has wisely shut himself up in inaccessible entrenchments so that I can't get at him without spilling a torrent of blood, and that perhaps to little purpose."

On September 9 he wrote in a dispatch to the Government in England: "My constitution is entirely ruined, without the consolation of having done any considerable service to the State, or without any prospect of it."

No wonder that the dispatch cast gloom over Whitehall. The Duke of Newcastle wrote, "Mr. Pitt, with reason, gives it all over, and declares so publicly."

Without confiding in anyone, however, Wolfe had conceived a plan. He had been examining with a telescope the plateau behind the city of Quebec, upstream, and espied a narrow path by which men could climb up the cliffs from the river bank.

Never suspecting that an attack from this quarter was feasible, Montcalm had stationed only a hundred men at the post there; yet the enterprise could hardly have been more risky. Wolfe had written to a colleague two weeks before: "My ill health hinders me from executing my own plan; it is of too desperate a nature to order others to execute."

On September 12 he wrote to his troops: "The officers and men will remember what their country expects from them"—a forerunner of Nelson's Trafalgar message.

In the dead of night, Wolfe led his men stealthily up the path from L'Anse au Foulon, and by zero hour on September 13 they were drawn up on the Heights of Abraham, a force of 4,500, ready to give battle. The victory was complete, but both Wolfe and Montcalm were mortally wounded.

Wounded three times—the final bullet pierced his breast—Wolfe was helped to the rear by some grenadiers. An officer, standing by his dying leader, exclaimed, "They run! I protest, they run!"

Wolfe murmured, "Who run?"

"The enemy, Sir," was the reply. "Egad, they give way everywhere!"

Turning on his side, Wolfe exclaimed, "Now, God be praised, I die happy!"

Andrew Wyeth, son of the famous illustrator N. C. Wyeth, painted especially for our use his striking portrait conception of Wolfe on the Heights of Abraham above Quebec.

Sir William Blackstone, Critical English Law

William Blackstone (1723–80)

WILLIAM BLACKSTONE'S greatest contribution to the English-speaking peoples is his codification of English law, which at the time he began his work he found "a huge irregular pile, with many noble apartments though awkwardly put together." In 1753 he began to deliver the series of lectures responsible for his success, and from them ultimately emerged his *Commentaries*, undoubtedly one of the most influential books in the English language.

Blackstone's influence has been greater in the United States than in England, because the book appeared at a psychological moment in American history. Abraham Lincoln read the four volumes in 1835 and said: "The more I read, the more intensely interested I became: never in my whole life was my mind so thoroughly absorbed. I read until I devoured them."

Blackstone was born in Cheapside, London. His Wiltshire-born grandfather, an apothecary in Newgate Street, married the daughter of a Wiltshire squire. Blackstone's mother died when he was twelve, and at an early age he was sent to Charterhouse, and subsequently to Oxford University. When he was twenty, he was elected a fellow of All Souls—"The College of All Faithful Departed Souls," a unique foundation established in the reign of Henry V to pray for the souls of those who fell in the wars of Henry and his son against France.

A fellow Middle Templar, Charles Viner, had endowed a professorship of the laws of England at Oxford. Blackstone's chance came when he was appointed to the Vinerian professorship. In his first lecture he declared that the Englishman "better be a stranger to the Roman than to the English Institutions, that the laws of England should be taught to all Englishmen and not merely to law students."

Blackstone's lecture attracted immediate and wide attention. To the future George III, then Prince of Wales, they were read by his mentor Lord Bute. They soon became well known in the American Colonies and were mentioned in correspondence between John Adams and Jonathan Sewall.

In 1761 Blackstone married Sarah Clitherow, "with whom he passed fourteen years in the enjoyment of the purest domestic and conjugal felicity."

After his marriage he purchased Priory Park in the pleasant little town of Wallingford on the Thames, of which he had been recorder since 1749. His family was reared there. Sir William does not quite fit into the setting of an 18th-century squire, for he disliked any form of outdoor exercise and devoted most of his time to reading. Small wonder that he suffered from gout.

Blackstone's interest in prison reform is, naturally, not so well known as his authorship of the *Commentaries*. His experience of the law aroused in him a passionate desire to improve the conditions of English prison life. Unlike the majority in his day, when there were 200 capital offenses, he did not regard severity of punishment as a deterrent of crime. When John Howard published his famous report on prison reform, Blackstone strongly supported him.

The fourth and final volume of the *Commentaries*, which appeared in 1769, met with the approval of George III because Blackstone exalted the royal prerogative and "held that the American plantations were subject to the control of Parliament."

Blackstone has been accused by some critics of being ultraconservative in outlook. He was rather a firm believer in the British Constitution and "an advocate of moderate reform based on experience."

"The indictment of George III in the Declaration of Independence is well supported," writes the American biographer, David A. Lockmiller, "by Blackstone's description of the rights of Englishmen, and it was for these rights . . . that the patriots were contending . . . Regardless of his personal sentiments, he had acquainted the Americans of their rights as Englishmen, and the patriot leaders, apparently forgetting or ignoring other parts of the *Commentaries*, asserted these rights against George III, and his fumbling Ministers . . . Although the Revolutionary War freed the United States from British control, the law of England remained to protect and to serve the people of the new country."

In 1924 when the American Bar Association presented to the British bar a statue of Blackstone, George W. Wickersham, chairman of the English-Speaking Union of the United States, made a speech which has special meaning for us today. After referring to the reverence of the English-speaking peoples "for liberty regulated by law," he concluded: "Let it" [the statue] "stand here" [in the Law Courts in London] "as a symbol of that law and justice upon which rests the [illegible] Let it [illegible] here as the symbol of the ties which unite the peoples of our respective countries in devotion to the common ideals of free men of English speech."

James Cook (1728–79)

JAMES COOK was the real discoverer of Australia. Though the [illegible] earlier [illegible], it was Cook who first surveyed its fertile eastern coasts and found that it was a land [illegible] to [illegible].

He was the first in history to cross the Antarctic Circle and to disprove the existence of a continent which up to his time had been supposed to lie not far south of Australia. Because he did not proceed far enough into the southern icefields he did not find the real Antarctic [illegible] and changed the map of the southern Pacific Ocean to virtually that which is in use today.

In 1778 he rediscovered the Hawaiian Islands, which had been found [illegible] the Sandwich Islands [illegible] the Earl of Sandwich, First Lord of the Admiralty. He sailed north along the coast of North America as far as Bering Strait in search of a "northwest passage" [illegible].

The son of a farm laborer, who subsequently became a bailiff, Cook was born in 1728 in a little two-room cottage at Marton in Cleveland, Yorkshire. He [illegible] Mary Walker, a lady living in the village.

After [illegible] Staithes, a fishing [illegible] a half he was apprenticed to a Whitby ship owner who exported coal to the Baltic. He remained in this employment for nine years. When the Seven Years' War with France broke [illegible] of a ship.

[illegible] Royal Navy, thereby starting a fresh life at the bottom of the ladder. His progress in the Navy was rapid, and before long he was appointed master of the *Solebay*, doing valuable survey work which attracted the attention of the Admiralty.

Famed for their accuracy, his charts of the [illegible] and of the approaches to the mighty St. Lawrence River can still be used.

As a result of observations Cook made of a solar eclipse at one of the Bagen Islands, he achieved fame as an astronomer and obtained the great chance of his life, his appointment by the Admiralty, at the instance of the Royal Society, as leader of the expedition to prosecute researches in the South Pacific and to make observations of the transit of Venus [illegible] 1769. His [illegible] to be Pacific [illegible] his second in 1772–75, his third in 1776.

Cook has many claims to fame, but surely none greater than his victory over scurvy, which before his time was regarded as even a greater [illegible] of shipwreck. We now know that the cause of the malady is the deficiency of vitamin C in food, but two centuries ago knowledge about [illegible] was elementary.

No [illegible] of the sailor at sea than Cook during his many years afloat. When he set out on his voyage to the South Pacific, he concentrated his attention on the problem of providing a balanced diet for his crew. He practiced what he preached; when his sailors were at first suspicious of his new-fangled methods, he and his officers were served at every meal with sauerkraut, which he knew to be very efficacious. The rations of salt meat, cheese, and suet were gradually reduced, and dried fruit was substituted. He was a firm believer in the plentiful use of onions, oranges, and lemons, and at every port of call laid in large supplies.

He experimented with such preparations as "marmalade of carrots" and salted cabbage, and after long periods at sea made the crew drink [illegible] When Cook arrived at Batavia he had made history, for not a member of his crew was suffering from scurvy. When he reached England, after a voyage of [illegible] 118. Cook's pioneer work was gradually taken to heart, and the regular administration of lime juice in the Royal Navy was begun in 1795.

[illegible] him now stands to mark the place where he was murdered by the islanders. Cook is rightly regarded as having laid the foundations of Australia and New Zealand. He has, therefore, the unique honor of being [illegible] Australia [illegible] It is fitting that his remains should rest in the Territory of Hawaii.

Our picture of Captain Cook was painted in 1902 for the National Gallery in Melbourne by the Australian-born Emanuel Phillips Fox (1865–1945), and is used by permission of the gallery officials.

William Hunter (1718–83); John Hunter (1728–93)

THE BROTHERS, William and John Hunter, the great anatomists, [illegible] collectors, and both died at virtually the same age. William, the elder of the two, was an eloquent and attractive lecturer; John, much the [illegible] he would take a draught of laudanum before beginning an address.

[illegible] William Hunter [illegible] and also [illegible] had contributed a paper to the Royal Society. He began his famous [illegible] Subsequently he gave up surgery for obstetrics and gained an enormous practice. He was appointed physician extraordinary to Queen Charlotte, who was busy increasing the family of George III. An enthusiastic [illegible]

In his papers and lectures William gave less recognition to John's [illegible] William lay on his deathbed.

As a youth, John Hunter loved sport and outdoor life and had toward books an aversion which he never overcame. His biographer says of him: [illegible]

At 17 he went to stay and work with his brother-in-law, a cabinet-[illegible] in Glasgow. [illegible] later. At 20 he traveled to London on horseback and joined his brother, who employed him on the work of dissection. [illegible]

Ten years before John Hunter died, he told an interviewer who ventured the opinion that he had dissected more human bodies than [illegible]

[illegible] dissections annual were [illegible] in thousands. Before breakfast each day he would devote two or three hours to dissecting. The rest of the morning was reserved for visiting patients in his consulting room. In the afternoon he visited his outdoor and hospital cases; at 4 he dined abstemiously, slept for an hour, and then worked hard till midnight. Five hours' sleep sufficed him.

[illegible] small in stature, 5 feet 2 inches tall, he possessed extraordinary vitality and concentration of purpose. The suffering that preceded his death did not deter him, Stephen Paget tells us, from writing to Africa "for [illegible] specimens of the bee tribe, chameleons, and any other beast or bird."

[illegible] years. Jenner was one of the friends who called him "the dear man."

At 45 Hunter married a princess, Anne Home, 29, whose parties became celebrated [illegible] Miss Elizabeth [illegible] anatomist, returning home one evening to find the drawing room [illegible] astonished everyone by saying, "I knew nothing of this kick-up, and I ought to have been informed of it beforehand; but as I have now received [illegible]

Hunter [illegible] establishment close to the site now occupied by Earl's Court Station of the London underground. On a tract of two acres he had a fashionable [illegible]

When Hunter died his widow was [illegible] he had spent £70,000 in collecting the contents of his museum.

He was prepared to resort to almost any means to advance knowledge. [illegible] was seriously ill, Hunter sought to obtain so unique a specimen for [illegible] a horror of being dissected, determined to outwit "the doctors." He [illegible] was to be carried out to sea and sunk in deep water.

By morning [illegible] the undertaker's men. It was taken to the Earl's Court Farm, where Hunter, who was [illegible]

On [illegible] William Hunter [illegible] the Royal College of [illegible]

Edward Jenner (1749-1823)

EDWARD JENNER conquered smallpox, the scourge more dreaded than the Black Plague, the loathsome disease that had killed or [illegible] countless victims. [illegible] Jenner did most of his work as a respected and beloved physician in the county where he was born.

Deeply interested as a boy in natural history, he had made a collection of the nests of dormice before he was 10 years old. He passed his leisure hours in searching for fossils. When his schooling was completed, he studied under a surgeon at Sodbury, in Gloucestershire.

The young medical student had his greatest stroke of good fortune when he [illegible] in London under John Hunter. With the family of the famous surgeon and anatomist he resided for two years.

Hunter was surgeon at St. George's Hospital, and his "menagerie," where he studied the habits of animals and made experiments, was close at hand. There young Jenner passed as much time as he could spare.

In 1771 Capt. James Cook, who had just returned from his first great voyage of discovery, brought to Hunter for study [illegible] Jenner was assigned the task of sorting and arranging.

As a result of the meeting with Cook, Jenner was offered the post of naturalist on the navigator's next trip. [illegible] have jumped at such an opening, but Jenner refused the offer, electing to remain in Gloucestershire as a practicing physician. He discussed with [illegible] prevention of scurvy.

In the opinion of his colleagues of the local scientific society, Jenner [illegible]

A milkmaid who had come to consult him when he was studying surgery at Sodbury had said of smallpox, "I cannot take that disease, for I have had cowpox." This chance remark had made an indelible impression on the young man.

[illegible] were rendered immune from smallpox. Methodical in his way, he worked for nearly a quarter of a century before he was ready to put his theories to the test. He "gave" [illegible] cowpox and "found" that only on the rarest occasions did those who had had cowpox contract smallpox.

On May 14, 1796, a date famous in the history of medicine, Jenner [illegible] taken from the vesicles of cowpox from the hand of the milkmaid Sarah Nelmes. [illegible]

As expected, the boy had cowpox, and had barely recovered on July 1 when Jenner inoculated him from a case of smallpox.

[illegible] for smallpox, which, as I ventured to predict, produced no effect. I shall now pursue my experiments with redoubled ardor."

[illegible] setts, described the discovery in the *Columbian Sentinel* of March 12, [illegible]

Among those who took a deep interest in the new discovery was [illegible] to his fellow citizens. In the course of July and August he and his sons-in-law vaccinated in their own families and in those of their [illegible]

Jenner was granted a diploma of membership by the American Academy of Arts and Sciences signed by John Adams, and he also received [illegible]

An Indian chief, by name Little Turtle, and nine or ten of his [illegible]

Before he died Edward Jenner had the supreme gratification of knowing that his discovery had saved the lives of millions.

[illegible] London. It is published by permission of the museum authorities.

Nelson (1758–1805)

NAPOLEON at the height of his power said, "Let us be masters of the Channel for six hours and we are masters of the world." He might have achieved his ambition to control the English Channel had it not been for Horatio Nelson, the hero of Trafalgar, who proved to the world that Britannia rules the waves.

Horatio Nelson, born in 1758 at Burnham Thorpe, where his father was rector, entered the British Navy at the age of twelve. Two years later he went as captain's coxswain on a north polar expedition. His next tour of service was in the Indian Ocean. There he fell ill and broke down, but he was soon back to duty off the coast of Honduras, protecting British trade against privateers during the American Revolution.

After the outbreak of the war with France he fought in the Mediterranean, losing the sight of his right eye in the Corsican campaign. He distinguished himself in the Battle of Cape St. Vincent in 1797. Later in the year he lost his arm at Santa Cruz de Tenerife.

The Battle of the Nile in 1798 upset Bonaparte's grand attempt to seize Egypt as a first step toward wresting India from the British. On August 1 Nelson sighted his quarry in Abu Qir Bay. Luck was on his side, for he arrived unexpectedly when the crews of the French ships were [illegible] for a ship at single anchor to swing there was room for him to attack. Nelson dressed his [illegible] with [illegible] "I had the happiness to win the command of an Irishman."

When the smoke cleared [illegible] British ships went in between the French fleet and the shore, and in less than four hours Nelson had achieved complete victory. All the French warships save two frigates were put out of action or captured. All Napoleon's hopes were blasted.

At Naples Nelson was greeted with delirious joy as "nostro liberatore." Lady Hamilton, wife of Sir William Hamilton, British Minister, accompanied her husband to the ship. On espying the conquering hero, she exclaimed, "Oh, God, is it possible?" and fainted on Nelson's arm.

In [illegible] Nelson [illegible] matters to right."

From [illegible] Nelson [illegible] from right. Nelson dubbed in Sicily with his *Immortalité* and in 1802 returned [illegible] Sir William Hamilton and Lady. Small wonder that Lady Nelson received him with "chilling [illegible] marks of disapproval when he reached London. The Nelsons were formally separated [illegible] this [illegible]

Not till Hitler's mastery of Europe in 1940 did the threat of invasion become [illegible] 1803-5. Napoleon was [illegible] full of [illegible] his purpose, he must deal first with England. "Fifteen millions," he said, "must give way to forty millions." But Napoleon, like Hitler, underestimated the staying power of his adversary.

Nelson [illegible] When he anchored at Gibraltar on July 19, 1805, he went ashore for the first time in nearly two years. Three weeks' leave with Emma at Merton in Surrey ended when the news reached him that the Franco-Spanish fleet was at Cadiz. He rejoined the *Victory* at Portsmouth and was back with the British fleet by September 29.

His first objective was to entice the enemy out of port—an objective Napoleon had already accomplished for him by ordering Admiral Villeneuve to sail out. As before the Battle of the Nile, Nelson carefully explained plans to the senior officers. His intention was to sail in two [illegible] fear of the enemy.

At daybreak on October 21 the signal for attack was given, Nelson himself leading the northern column. At eleven he returned to his cabin and wrote a [illegible] will, leaving [illegible] his King and country.

A little before midday he hoisted the signal "England expects that every man will do his duty." The *Victory* broke into the enemy's [illegible] Villeneuve's flagship, the *Bucentaure*, and poured in a terrible broadside.

[illegible] with Captain Hardy Nelson was [illegible] wounded. As he fell, he said, "They've done for me at last, Hardy."

Nelson fought off death for three hours. When Hardy brought him news that fourteen or fifteen ships had surrendered, he remarked, [illegible]

His last words were, "I have done my duty, thank God for that."

At Trafalgar British Sailors Nobly Responded to Nelson's Signal: "England Expects That Every Man Will Do His Duty"

Some British Poets (1716-1936)

GIANTS among the early English poets were Chaucer, with his immortal *Canterbury Tales*, Spenser, who dedicated *Queen Elizabeth* in his *Faerie Queene*, the inspired Shakespeare, with dramatist and lyrist; and Milton, famed for his epic *Paradise Lost*. In the 220 years from the birth of Thomas Gray (1716) to the death of Kipling in 1936 England produced another galaxy of poets whose number and genius are not approached in any other land. This period witnessed the birth of Wordsworth, Scott, Coleridge, Byron, Shelley, Keats, Mrs. Hemans, Elizabeth Barrett Browning, Tennyson, Robert Browning, the Rossettis, and Rudyard Kipling.

Gray's *Elegy Written in a Country Churchyard*, said to be the best known poem in English literature, has given Stoke Poges immortal fame. William Cowper, born 15 years after Gray, is also associated with Buckinghamshire. The old brick house, now the Cowper Museum, still stands at Olney, where the poet composed *The Task* and *John Gilpin*.

Blake was the birthplace of William Blake, seer, poet, painter, and etcher, whose *The Tiger* and *The Lamb* are considered nearly perfect lyrics and are [illegible] as well as [illegible] in Milton's sonnet.

Twelve miles from Blake's birthplace was born Robert Burns, the son of a Scottish gardener. Much of his best verse took shape when he was plowing at Mossgiel; in the evenings when he returned home he would [illegible] his lines to paper.

When Wordsworth [illegible] for a new and better world, his whole heart [illegible] when the [illegible] fell. Samuel Taylor Coleridge threw in his lot with Wordsworth and lived near Wordsworth [illegible] Alfoxden. Then English poetry may be said to have been born again. Here Coleridge completed his masterpiece, *The Ancient Mariner*.

[illegible] sweet-tempered bairn,' as Wordsworth describes him, who leaped into fame at the age of 34 with the publication of *The Lay of the Last Minstrel*.

Childe Harold's Pilgrimage and the Greek tragedy had been, [illegible] when Byron was only 21 years old. *The Prisoner of Chillon* was written four years later. Byron gave his life, as he had previously given [illegible] to the cause of Greek freedom. While enrolling Greek insurgents at Missolonghi, Missolonghi, Greece, he was stricken and died on April 19, 1824, age 36.

Shelley and Keats are [illegible] because their span of life was almost coterminous. Shelley lived till he was 30, Keats till he was 26. Keats's period of output was less than four years. His first [illegible] was *Endymion*, opens with the well-known line, "A thing of beauty is a joy forever." Among his best-known poems are *The Nightingale* and [illegible].

Shelley wrote *The Revolt of Islam*, *Prometheus Unbound*, and [illegible] lyrics, such as the *Ode to the West Wind*.

Among the women poets was Felicia D. Hemans, author of the famous *Casabianca* and many other poems.

Elizabeth Barrett Browning published her first poems at the age of 17. The friendship between Elizabeth Barrett and Robert Browning, aged 33, grew out of some comments of the former's in which she expressed her admiration for Mr. Browning's poetry.

This led him to write to her in January, 1845, "I love your verses with all my heart, dear Miss Barrett, and this I come to say." This was [illegible] September 12, 1846. This was to set in Italy.

[illegible] Elizabeth Barrett Browning [illegible] *the Portuguese*, regarded by many as the greatest love poem in English.

[illegible] *The Ring and the Book*, eight years after her death, that he was generally recognized as a *great* poet.

Tennyson's great poem, *In Memoriam*, was published in 1850, the year of his marriage and of his appointment to the Poet Laureateship in succession to Wordsworth. His *Idylls of the King*, in 1859, achieved [illegible] success. [illegible] the best and [illegible] widely read of English poets.

Dante Gabriel Rossetti's best-known poem is *The Blessed Damozel*.

Rudyard Kipling's greatest period of output was between the ages of 20 and 30 when he produced his *Departmental Ditties* and *Barrack Room Ballads*, and, in prose, the two *Jungle Books* and other stories.

Francis Breese Davis, Jr., owner of the painting commemorating Lord [illegible] view to the [illegible] *Constitution* [illegible] July 18[illegible], permits the National Geographic Society to use this historic picture

Queen Victoria (1819–1901)

AS A YOUNG MAN, I watched Queen Victoria's funeral from the roof of St. James's Palace. That gloomy winter day seemed to me the end of the world in which I had lived. Among the chief mourners was Kaiser Wilhelm II, who [illegible] Germany, desired to play the chief role on the European stage.

While Victoria lived, all was well, for her descendants were to be found at every court in Europe. She could summon her grandson, the impulsive Kaiser [illegible] of her granddaughters was married to Nicholas II, Tsar of All the Russias. But now, after the longest reign in British history, what lasting [illegible]

Victoria, only child of the Duke of Kent, fourth son of George III, was born at Kensington Palace on May 24, 1819. When she was three months old, her cousin Albert was born at Rosenau, near Coburg. The same midwife attended the entry into the world of both children, and in Saxe-Coburg circles the names of the two were always linked together.

At 2:12 a.m. June 20, 1837, William IV died at Windsor Castle. The Archbishop of Canterbury, who had performed the last religious rites, and Lord Conyngham, the Lord Chamberlain, [illegible] arrived at Kensington Palace [illegible]

Victoria [illegible] kept the [illegible] Lord Melbourne [illegible] Lord Lord Conyngham [illegible] ness of state to the Queen, and, even her sleep must give way to that.' [illegible] Queen [illegible] gown, her feet in slippers, her nightcap thrown off, and her hair falling down her back. There were tears in her eyes, but she was cool and collected.

At 11 the Privy Council met at Kensington Palace. The Queen, who was less than five feet in height, was graceful and had a dignity [illegible] filled her chair, she filled the room.'

The Queen's uncle, King Leopold of the Belgians, who had arranged a visit of the Duke of Saxe-Coburg and his two sons to England in 1836, had [illegible] in respect to Victoria's marriage [illegible] Albert and his brother were invited to Windsor in October, 1839, and he wrote openly to his niece, 'May Albert be able to strew roses without thorns on the pathway of life of our good Victoria! He is well qualified to do so.'

Everything went according to plan. Victoria wrote to her uncle, 'Albert's beauty is quite striking, and he is most amiable and unaffected [illegible]

One evening [illegible] Queen [illegible] wearing on her bosom. Albert slit with a penknife the breast of his [illegible] and placed the flower next to his heart. The following day Queen Victoria formally proposed marriage.

For twenty years the Queen enjoyed married happiness such as is rarely found. She shared many tastes with Albert and as years passed relied more and more on his judgment. On May 1, 1851, she presided over the opening of an exhibition in the newly erected Crystal Palace in Hyde Park, an undertaking steered to success by her husband. It was a great peace festival to unite the industry of all nations.

Poor Victoria, the [illegible] for [illegible] during the Crimean War, which [illegible] the sorrow of her life was the sudden death of the Prince Consort on December 14, 1861. She carried on through 40 years of widowhood.

During the last year of Albert's life the American Civil War broke out. [illegible] April, 1861, the Southern [illegible] Mason and Slidell, who had embarked on the British vessel *Trent*, were seized by Captain Charles Wilkes and taken aboard [illegible] ship. A crisis developing between Great Britain and the United States, Palmerston drafted a dispatch which would certainly have led to war.

Prince Albert [illegible] for the [illegible] to recast the dispatch and assume that an overzealous officer of the Federal fleet had made an unfortunate error which could easily be repaired by the restoration of the passengers and a suitable apology. [illegible]

The world of Victoria was a stable world. At its heart was a Queen who was the dominating influence of her time through her living [illegible] and her devotion to [illegible]

Sir David Wilkie's painting of the young Queen presiding at her first Council is Reproduced by gracious permission of His Majesty the King

Michael Faraday (1791–1867)

"FATHER OF THE AGE OF ELECTRICITY" is a title that may be properly conferred upon Michael Faraday. In 1831 he gave to the world the epoch-making discovery that an electric current can induce another current in a different circuit.

Every electric motor and dynamo in use today operates upon this principle, electromagnetism. When a bar magnet is moved near or through the center of a coil of wire, a current flows through the wire, although the wire and magnet are not connected. When the magnet is moved back and forth, the current in the wire changes its direction of flow accordingly. Likewise, if a coil of wire through which a current is flowing is moved in the vicinity of another coil, a current will flow momentarily through the second coil.

Faraday was born at Newington Butts, now a part of London, the son of a blacksmith. He once said, "I love a smith's shop and everything related to smithery. My father was a smith."

Young Faraday was apprenticed to Riebau, a news agent and bookbinder for whom he at first delivered papers. A customer, a Mr. Dance, enabled the boy to hear a lecture by Sir Humphry Davy at the Royal Institution, and Faraday was enthralled. He kept notes of the lectures, which he illustrated and bound and, on his employer's advice, sent to Davy.

In afterlife Faraday wrote: "When I was a bookseller's apprentice, I was very fond of experiment, and very averse to trade . . . My desire to escape from trade . . . induced me at last to take the bold and simple step of writing to Sir Humphry Davy."

On December 24, 1812, a knock on the door announced Davy's coachman with a note asking Faraday to call at the Royal Institution the next day and he was hired by Davy at a weekly wage of 25 shillings.

Six months later Davy took Faraday as his secretary-assistant on a European tour, during which he consorted with the leading scientists of the day. This tour, priceless to Faraday, took for him the place of a university training.

Faraday worked out his problems for the sheer joy of solving them, leaving to others any practical application. Once, after he had given a public demonstration of the induction of electric currents, a lady inquired what useful service could come of it. In reply, the physicist asked, "Can you tell me what is the use of a newborn baby?"

It is interesting that the American Joseph Henry, Secretary of the Smithsonian Institution, working independently, had made the same basic discovery as Faraday and perhaps even earlier, though Faraday was the first to publish his findings. Years later, on a visit to England, Henry's superlative laboratory technique drew from the watching Faraday the spontaneous and delighted tribute of a shout, "Hurrah for the Yankee!"

In proving the definite and measurable chemical action of electricity, Faraday coined a vocabulary, including such words as "electrode," "electrolyte," "anion," "cation," "anode," and "cathode," which, indispensable today, suggest the vast results of his research.

His discovery of benzene in 1825 gave to subsequent organic chemists the first of a series of coal tar hydrocarbons.

The concept of the "magnetic field," the lines of force surrounding a magnet, also was worked out by Faraday. He studied steel alloys, produced new kinds of optical glass, and did important work on the liquefaction of gases. Faraday was associated with the Royal Institution for 54 years, becoming director of the laboratory in 1825. He refused a knighthood, preferring to remain "plain Michael Faraday to the last."

Closely associated with Faraday are the names of two other British scientists of first rank, Sir Humphry Davy (page 527) and James Clerk Maxwell.

Davy (1778–1829), as professor of chemistry at the Royal Institution, recognized Faraday's genius and opened the world of science to him. Born at Penzance, Cornwall, he first was apprenticed to a surgeon-apothecary before becoming interested in chemistry.

He is most noted for his invention of the miner's safety lamp, which put an end to the disastrous explosions of firedamp gas set off by the open flames of lamps in mines. He found that a metal screen with small apertures placed over the flame would prevent explosions from being touched off. Lamps of this type are still in general use in mines to test for the presence of firedamp.

Davy also discovered the anesthetic properties of nitrous oxide, known as "laughing gas," by experimenting with its effects upon himself. He was the first to isolate potassium and sodium by running electrical currents through solutions. This laid the groundwork for the process of electrolysis, the tearing apart of substances by electricity, in wide use today.

Davy discovered five new elements.

James Clerk Maxwell (1831–1879) was the first to show theoretically that electromagnetic waves are propagated through space at the speed of light. All radio communication, television, and radar are based in essence on work inspired by Maxwell's pioneering theories. Born in Edinburgh, Maxwell directed the founding of the Cavendish Laboratory at Cambridge University, where he was professor of experimental physics.

The Mormon Paradox: The World Knows Its Heart's Longing

[illegible]

Florence Nightingale (1820–1910)

FLORENCE NIGHTINGALE gave up the comforts of a luxurious home to become an angel of mercy to the wounded and dying in the Crimean War. [illegible] powers [illegible] work" [illegible] today stands as a virtual synonym for the word "nurse."

Conscious of a world of pain beyond the circle of her family at home, she [illegible] the [illegible] time. In her words she wrote: "The first thought I can remember, and the last was nursing work."

[illegible], in the [illegible] which [illegible] his research," reads an entry made in her diary in 1850 after she had passed two weeks at the Institution of Protestant Deaconesses at Kaiserswerth on the Rhine. "Now no more childish things, no more vain things, no more [illegible] Work."

When Florence told her mother and sister that she proposed to study the methods of nursing, they shuddered. Mr. Nightingale consulted his friends, and was shocked by what he heard of nursing conditions.

In the London *Times* of October 9, 1854, appeared a dispatch of W. H. Russell telling a tragic story of disgraceful unpreparedness, of lack of surgeons, and of inadequacy of supplies in the Crimean campaign. "What will be said when it is known that there is not even linen to make bandages for the wounded?" Russell asked. The *Times* published a leading article entitled "Why have we no Sisters of Charity?"

Two days before the appearance of Russell's dispatch in the *Times*, Florence Nightingale had [illegible] for Scutari. Her [illegible] Secretary of War [illegible] nurses had been organized to go out to Scutari and that she had [illegible].

This letter crossed with one from Herbert to her in these terms: "There is but one person in England that I know of who would be capable of organizing and superintending such a scheme. . . . My question simply is, would you listen to the request to go and superintend [illegible] thing?"

[illegible] interview between [illegible] Secretary Herbert [illegible] departure for London.

In due course she and her nurses arrived at the huge, gaunt yellow barracks with accommodations for [illegible] persons. The [illegible] proved [illegible] when [illegible] British General hospital proved inadequate after the Battle of Alma.

There were five miles of beds, floors were packed with wounded, and at half an hour's notice fresh shiploads had to be received from [illegible]. [illegible] Florence Nightingale [illegible] average of three limbs per man."

Gradually she got the dreadful hospital in order. Hers was no soulless organization, however. She was always at hand, to whom the dying soldier could [illegible].

The [illegible] had [illegible] of endurance. On days of emergency she was known to work 20 hours without pause. An observer who accompanied her on a night round of the wards wrote: "It seemed an endless walk. . . . As we slowly passed along, the silence was profound; very seldom did a moan or cry [illegible] set down before she bent over any of the patients."

The ordeal of the Crimea left a deep mark on the heroic nurse. She [illegible]. Her [illegible] Lane, where she went to live in 1858, was filled with shelves of blue-books and volumes of official reports. Karl Pearson called her "the passionate statistician." Here she promoted Army reform and wrote her *Notes on Nursing*.

She became a recognized authority on problems of irrigation in India, on methods of combating famine and drought, and even on the struggle [illegible]. Though her position was unofficial and unpaid, her influence was such that each successive Viceroy, before taking up his duties, consulted her. It has been said that her cooperation with Sir John Lawrence did as much for the British Army in India as her work of reform at home after the Crimea.

On August 13, 1910, "the Lady of the Lamp" breathed her last. A gracious American tribute is afforded by the account of the work of the U. S. Sanitary Commission, appointed during the American Civil War. It is dedicated to Florence Nightingale in these words: "All that is herein chronicled you have a right to claim as a result of your own work."

[illegible]

Charles Dickens (1812-70)

ENGLAND HAS PRODUCED many great novelists [illegible] Jane Austen, the Brontë sisters, [illegible] George Eliot, Meredith, [illegible] Hardy [illegible] but a few. [illegible] appeal or been read and reread by so many of all classes.

[illegible] characterizations of real people as the father of cartooning drew pictures of them. Unquestionably, many of the characterizations were caricatures, [illegible].

[illegible] Dickens [illegible] He was the first writer to use common people as characters in fiction and to make [illegible] felt that they were [illegible].

Prof. George Saintsbury writes of Dickens: "It is probably safe to say (there making no exception at all and giving him no companions), that no other author in our literary history has been both admired and enjoyed for such different reasons; by such different tastes and intellects; by whole classes of readers unlike each other.

"The uncritical lover of the sentimental, of the melodramatic; the frank devotee of mere 'fun'; the people who simply desire to pass their time by witnessing a lively and interesting set of scenes and figures; the respectable yearners for social and political reform; the not quite [illegible] and more accomplished classes, these and a dozen or a hundred other types all fly to Dickens as to a magnet. . .

"[illegible] through night after night and week after week as if the whole were one [illegible] task with all but two or three."

The career of Charles Dickens reads like a fairy tale to struggling authors. His first sketches of London life were accepted by the *Old Monthly Magazine*, when he was not yet 22. His first book, *Sketches by Boz* [illegible] *The Posthumous Papers of the Pickwick Club* was published on March 31, 1836, when he was 24, and two days before his marriage to Catherine Hogarth at St. Luke's Chelsea.

By the time Sam Weller was introduced into the pages of *Pickwick*, [illegible] When Queen Victoria came to the throne, he was 25, and "all the world" was reading *Pickwick*—surely enough to turn the head of any ambitious young man.

Charles Dickens was born [illegible] in Portsmouth. His father, described as "an old buck," with no sense of the value of money, was a clerk in the Navy pay office. Charles's paternal grandfather was a [illegible].

[illegible] but what he lacked in scholastic training he obtained in the greatest [illegible] regarded by many as his greatest novel, appeared, it was obvious that here were drama and tragedy written with firsthand experience, for he himself had been an underdog.

[illegible] of six shillings. Two weeks after his joining the blacking firm the [illegible]

Into the next dozen years was crowded a whole gamut of experiences. He returned to school for two years, became an office boy and clerk [illegible] porter in the Consistory Court of Doctors' Commons. He worked for four years as a reporter in the House of Commons, became the "fastest and most accurate man in the Gallery," acquired contempt for "the [illegible]

Dickens [illegible] a quarter of a century later. On his first visit there was trouble about [illegible]

Near the end of his life Dickens came again to America to deliver [illegible] *Edwin Drood*, he died of a sudden seizure at Gad's Hill Place.

By [illegible] R. W. Buss of Dickens seated in his library at Gad's Hill surrounded by sketches of the characters he created. The artist depicts the great novelist dreaming out the plot of a new story to be written.

Edwin Landseer (1802-73)

DURING [illegible] of the 19th century Sir Edwin Landseer, the versatile artist who [illegible] his hand to sculpture to create the [illegible] at Trafalgar Square, London, was the most popular British painter. [illegible] of his pictures of [illegible] and [illegible] in Scotland adorned the walls of thousands of homes in Victorian England. Probably best known of his many works is the "Monarch of the Glen," painted in 1851. One of my earliest recollections is of that magnificent stag looking out from [illegible] over my father's [illegible] room table.

Edwin Landseer was the third [illegible] son of John Landseer, painter and engraver. The eldest son, Thomas, [illegible] who devoted most of his life to reproducing Edwin's works. Charles, the second son, was a historical painter. Also an artist was a daughter, Jessica, [illegible] pictures were exhibited at the Royal Academy.

Edwin Landseer never married, and Jessica kept house for him in St. John's Wood all [illegible] life. [illegible] "a [illegible] little lady," [illegible] in a very quiet, unostentatious way.

John Landseer, recognizing the early signs of genius in his youngest son, [illegible]. [illegible] the [illegible] sketching [illegible] in those days stretched from Marylebone to Hampstead. [illegible] his first [illegible]. [illegible] the clever [illegible].

The sketches [illegible] Edwin [illegible] attention to the study of wild beasts. He was often to be found, either at the menagerie at the Tower of London, where wild animals had been kept [illegible] centuries, or [illegible] at Exeter 'Change in the Strand, [illegible] Wild Beast Show. Before he was 12 years [illegible] could draw [illegible] and pencil, and paint [illegible] in water colours and in oils.

In 18[illegible] of Edwin's [illegible] the Royal Academy, a [illegible] B. R. Haydon, a well-known painter, [illegible] urged the [illegible] anatomy [illegible] the old masters [illegible] the artist [illegible] paint [illegible] who knew what [illegible]. Young Landseer [illegible] the first opportunity of [illegible] the [illegible] of a [illegible] and he [illegible].

[illegible] friend, C. R. Leslie, an American artist, Landseer went to Scotland in 18[illegible]. The two young [illegible] at Abbotsford with Sir Walter Scott, Leslie having been commissioned by George Ticknor, a Boston publisher, to paint a portrait of the famous writer. [illegible] Scotland [illegible] world. [illegible] the [illegible] of the pipes and the [illegible] of [illegible] tossing the caber and throwing the hammer.

His first [illegible] "The [illegible]" [illegible] and in the following year [illegible]. During [illegible].

In 1839 he painted his first portrait of Queen Victoria, the portrait which the Queen gave to Prince Albert before her marriage. Landseer [illegible] Queen and Prince [illegible].

In 1855 at the [illegible] Exhibition in Paris he was awarded the Gold Medal, the only British artist to be so honoured. He was now at the zenith of his career, [illegible].

In the following decade [illegible] depression which [illegible] his career. He became oversensitive and [illegible]. Nevertheless, [illegible] and took more brandy than was good for him. He [illegible] however, and in 1865 was offered the presidency of the Royal Academy, an honour which he declined.

[illegible]. From [illegible] onward he was engaged on the work of [illegible] the lions for the Nelson Monument in Trafalgar Square. These were placed in position in 1867.

During the last years of his life he was [illegible]. He died on October 1, 1873, [illegible].

John Ballantyne's picture of Sir Edwin Landseer [illegible] the lions of Trafalgar Square hangs in London's National Portrait Gallery.

Lord Lister (1827-1912)

JOSEPH LISTER [illegible] as one of the truly great benefactors of the human race. In common with Jenner also, Lister had the deep satisfaction of witnessing the triumph of his methods in his lifetime.

At the coronation of Edward VII in 1902 the King conferred an [illegible] for you and your work. I would not have been here to-day."

The coronation of Edward had been set for the previous year, but had been postponed because the King had undergone an operation for "appendicular abscess."

Lister was born in 1827 in an old house in London's dreary East End [illegible] resort of well-to-do Quakers. His father, a member of the Society of Friends [illegible] the Quaker school Grove House. Later [illegible] the London University College, London.

[illegible] of the baffling problem of the disease known as "hospital gangrene."

When Lister was 26 years old, his teacher, William Sharpey, professor of [illegible] in the Edinburgh Infirmary. For 25 years he lived and worked in Scotland. His [illegible] years.

A century ago the infirmaries of Edinburgh and Glasgow were no worse than hospitals elsewhere, but Lister was appalled by what he saw. The stench of the wards, where the windows were invariably kept shut, tested the strongest stomach. He soon realized that the hospital, instead of being a place where health was restored, was far too often merely [illegible]

[illegible] London, Edinburgh, and Glasgow Lister learned that two out of every five amputations resulted in death. Patients who underwent amputations in the country, he found, stood far more [illegible] than in [illegible] "Pyæmia in [illegible] in the towns seem because it is prevalent as in the old."

Lister proved that it was not in the hospital that the causes of mortality lay hidden, but in the operator himself, his tools, and his [illegible] to apply its lessons.

Lister's great discovery was that it might be practicable to protect wounds [illegible] so essential, Lister ascertained that one of his greatest foes, in an indistinct [illegible]

In 1860 he was appointed professor of clinical surgery in the University of Glasgow, where the death rate from amputations was 39 per cent. He tried new methods day by day and for years waged a ruthless [illegible]

[illegible] sequently diluted the antiseptic and had all wounds bathed with the solution. After five years, he introduced absorbable ligatures.

[illegible] of his efforts [illegible] methods of healthiness.

[illegible] appreciate the immense significance of his work, and he was the recipient of a great ovation when he visited Germany in 1875. Among the [illegible]

He received during the later years of his working life many honors and [illegible] "My Lord, it is not a profession, it is not a nation, it is humanity itself [illegible]

[illegible] the picture of Lord Lister, father of antiseptic surgery. The American [illegible]

Work Origin of Species Charles Darwin Started World-shaking Controversy

[illegible]

Charles Darwin (1809–82)

THE REMARKABLE FACT about Darwin is—how un-Darwinian? This frail, scholarly scion of two famous families (his grandfathers were the scientist Erasmus Darwin and Josiah Wedgwood, the great English artist-potter) was far removed indeed from any conception of a creature that could fight its way up from the jungle.

Darwin proved beyond reasonable doubt that man, like all living things, is a product of natural selection through what he called "survival of the fittest."

How troubled Darwin must have been when the whole structure of theology was shattered by his simple thesis that man was a child of animal evolution, subject to the same processes of modification as other of Nature's animals: not fallen from Adam, but risen—if such could be the right word for evolutionary descent—from the ape.

Darwin the patient naturalist, as the resultant of the Darwin and Wedgwood breed lines exemplified in his own person the fact that, unlike the wild animals, man *can* consciously control his own evolution if he so wish.

After taking his degree at Cambridge in 1831, Darwin volunteered to accompany a surveying expedition on H.M.S. *Beagle* to circumnavigate the Southern Hemisphere. He felt he was too physically sensitive to follow his father's profession of physician (an unanesthetized child bound to the operating table drove him from the building with its shrieks); the only possible useful knowledge he possessed was a grounding in geology and the sense of geologic time.

And his strength proved barely able to survive the five years at sea, which marked him for a lifetime of pain. Nature would have culled him as a mistake if it had not been for his cousin-and-wife Emma's constant sacrifice. Every sentence written into Darwin's notebooks marked an hour or a day which Emma had given to guarding his failing strength.

Thus sheltered in infinite leisure and care, the invalid Darwin confided to a private notebook and even-more-private letters the evolving theory which the island-isolated life on the Galapagos group had first set stirring within him, a theory which he knew would murder many established scientific concepts.

He might well have died without the world generally ever being the wiser if in 1858 he had not received suddenly in his country retreat at Downe House in Kent a letter from a professional plant collector, Alfred Russell Wallace, written from Ternate in the Malay Archipelago. In this letter Wallace had set down some theses: "There is no limit of variability to a species, as formerly supposed.

"The life of wild animals is a struggle for existence. [illegible] will [illegible] the [illegible] species." He [illegible] comments.

Darwin wrote to his friend, the famous geologist Charles Lyell: "Wallace has today sent me the enclosed. . . . I never saw a more [illegible] coincidence; if Wallace had my MS. [illegible] written out in 1842, he could not have made a better short abstract!"

Had Darwin been the king of a scientific jungle, here he should have felt it necessary to forestall the young challenger by hastening into print for the prize of "prior publication." But Darwin was most un-Darwinian. He wrote: "I should be extremely glad now to publish a sketch of my general views in about a dozen pages or so; but I cannot persuade myself that I could do so honourably. . . . I would far rather burn my whole book than that he or any other man should think that I had behaved in a paltry spirit."

Acting on their own responsibility, Darwin's friends, Lyell and Joseph Hooker, presented before the Linnean Society on July 1, 1858 and then published, the joint papers of Wallace and Darwin. A year later Darwin filled in the details in his book *Origin of Species*. It cleaved the thought of Britain and the traditional civilized world in twain. Nothing about Nature would ever look quite the same more.

The author of *The Descent of Man* was not too proud to make his last published book the study of how each inch of the earth's surface loam has passed and will pass again through the bowels of earthworms. No life was too lowly for him to learn from.

Darwin's account of his voyage, with his descriptions of the people, natural history, and geology of South America and of Pacific and Atlantic islands, makes his *Voyage of the Beagle* even today a most entertaining narrative. He concludes: "A traveller should be a botanist, for in all views plants form the chief embellishment."

During the years that Darwin was putting the finishing touches on his theories, Gregor Mendel, an obscure Austrian monk, was discovering in his experiments with hybrid peas the mechanism of heredity which was unknown to Darwin.

This forced abandonment of some of Darwin's ideas and modification of others, but modern geneticists have placed on an even sounder basis the central concept of evolution.

Cecil Rhodes, the Diamond King, Founded the Rhodes Scholarships

Cecil Rhodes (1853–1902)

As a diamond "digger" at the age of 24, Cecil Rhodes passed many months on a solitary trek, on foot or on an ox wagon, exploring the hinterland of Cape Colony. He was thinking out, as he toiled in South Africa, both his own future and the future of mankind. Before he had amassed his great fortune, he made a will disposing of it.

In his will Rhodes makes his "Confession of Faith": "It often strikes a man to inquire what is the chief good in life, to one the thought comes that it is a happy marriage, to another a great wealth, and as each seizes on the idea for that he more or less works for the rest of his existence. To myself, thinking over the same question, the wish came to me to render myself useful to my country. . .

The young Englishman had two main objects: to promote the welfare of the British Commonwealth, and to unite the whole English-speaking race, which he regarded as "one of the chief of God's chosen engines for executing coming improvements in the lot of mankind." To him it was a matter of indifference whether the capital of the English-speaking world was in Washington or London; as *modus vivendi* he suggested alternating terms of five years for Washington and London as the supreme seat of government.

The son of a country vicar, of yeoman stock, Rhodes was born at Bishop's Stortford, in Hertfordshire. His health broke down when he was only 16 years old, and he suffered from heart trouble all his life. In 1870 he was sent out to Natal to join his eldest brother, Herbert, who was growing cotton. Diamonds had just been discovered near Kimberley, and Herbert Rhodes joined the rush for the diggings, leaving his young brother to wind up affairs on the farm.

Just a year after his arrival, Rhodes, a tall, shy youth, set out for Kimberley with an ox-drawn Scotch cart, a pickax, a shovel, a Greek [illegible] and a well thumbed copy of Marcus Aurelius. Diamonds as a means of obtaining wealth were the lure, but at the back of his mind was the hope that he would earn enough money to enable him to complete his education at Oxford. Once at Kimberley, Rhodes soon found himself in possession of his brother's claim. Herbert returned to England.

The dry air of the high veld agreed with Rhodes, and he prospered. Two years after his arrival at Kimberley he achieved his ambition of going to Oxford, and matriculated at Oriel College. For eight years he divided his life between the rough surroundings of the diamond diggings and the cultured environment of scholastic life at Oxford. Despite the increasing cares of South Africa, he took a pass degree at Oxford in 1881.

Rhodes crammed into 20 years' accomplishments what few other men could have attained in half a century. At 21 he was one of the most successful diggers, and by 1880 he controlled the De Beers mines, named after the original Dutch owner of the land. He made his first will after a serious heart attack in 1877. In 1889 his sixth and last will left his fortune of six million pounds to promote great causes. The will established the Rhodes Trust which provides at Oxford 100 scholarships for students from the United States and 60 for students from the British Empire. The year before he took his degree he was elected as a member for Barkly West in the Cape Parliament, a seat which he retained all his life.

Rhodes was largely responsible for securing the hinterland of Cape Colony. He became Prime Minister of the Colony in 1890 and resigned in 1896. Thanks to him, German plans to halt British expansion northward were checked. With the establishment of Rhodesia, a vast and fertile area was added to the Empire.

He had genius for handling men. In the Matabele campaign when the rebels had been driven into the impregnable fastnesses of the Matopo Hills, warfare which might drag on for years seemed inevitable. Rhodes caused word to be sent to the Matabele that he was there, to have his throat cut if necessary, but he was ready to have it out with them, and would come to them, undefended, to hear their side of the case.

Accompanied by an interpreter, he met the chiefs in the heart of the Matopos. During the discussions some younger chiefs got out of hand. Rhodes's companion advised him to escape, but he stood his ground and shouted to the Matabele, "Go back, I tell you!"

They withdrew and Rhodes asked the assembled chiefs, "Is it peace or is it war?"

Such was his magnetism that the answer was, "It is peace."

After the South African War, Rhodes, who was in England early in 1902, was called back to South Africa on business. He was now completely broken in health as a result of terrible hardships endured during the long siege of Kimberley. On his return his condition became worse. He was moved from his beloved Groote Schuur at the foot of Table Mountain to a little cottage by the sea at Muizenberg. There, after three weeks of great suffering heroically borne, he died at the age of 49. His last words were: "So little done, so much to do."

Everybody Who Does Educate Your Baby Is Indebted to Lord Rayleigh

[illegible]

Lord Rayleigh (1842–1919); Sir William Ramsay (1852–1916)

GAS-FILLED electric-light bulbs, used by the millions today to furnish efficient illumination, trace their origin in a sense to the discovery of the gas called "argon" by John William Strutt, third Lord Rayleigh.

Equally important, the finding of argon led to Sir William Ramsay's work in identifying other new gases in the earth's atmosphere, including helium and neon, which now have important commercial uses.

Argon is a colorless, odorless gas comprising 94-hundredths of one percent of the air. It is used commercially, mixed with nitrogen, in electric-light bulbs. Such lamps, filled with gas under pressure, give more light than the vacuum type, because the filament can be kept hotter without breaking down.

The discovery of argon resulted from a painstaking effort by Rayleigh and Ramsay to learn why nitrogen released from ammonia by a chemical process had a slightly smaller atomic weight than nitrogen obtained from the air. A trace of an inert gas mixed with the latter accounted for the difference, they found, and it was named "argon."

Born November 12, 1842, Rayleigh was an aristocratic and learned scientist like Robert Boyle, and succeeded to his father's title as baron in 1873. He was educated at Trinity College, Cambridge, where he distinguished himself in the 1865 Mathematical Tripos.

Rayleigh received the Nobel prize in physics in 1904, was elected president of the Royal Society a year later, and in 1908 became Chancellor of Cambridge University.

One of Rayleigh's most famous works, his *Treatise on the Theory of Sound*, still a leading textbook on the subject, was begun during [illegible] The trip was taken on [illegible] houseboat, following a severe attack of rheumatic fever which the scientist suffered soon after his marriage to Evelyn Balfour, sister of A. J. Balfour, later Prime Minister.

Rayleigh succeeded James Clerk Maxwell (page 510) as head of the world-famous Cavendish Laboratory of Physics at Cambridge in 1879. There he undertook research on the "redetermination of the electrical units (the ampere, volt, and ohm) in a separate measure," which resulted in a classical series of papers published by the Royal Society.

Most of Rayleigh's researches, however, were carried on in a stable loft laboratory on his estate, Terling (pronounced Tarling) Place, near Witham, in Essex, to which he retired after five years at the Cavendish Laboratory. There, in a somewhat crude and homemade workroom which no doubt would seem pitifully inadequate to the research workers of today, he continued his monumental contributions to physics for 35 years.

World-wide honors and distinctions came to him. He was one of the original members of the Order of Merit, instituted at the time of the coronation of King Edward VII. His genius was widely recognized in the United States. He was elected a member of the American Philosophical Society in 1888, and foreign honorary member, American Academy of Arts and Sciences, in 1888. In 1895 he and Sir William Ramsay received a Hodgkins Fund award of $10,000 from the Smithsonian Institution, the Barnard Medal from the National Academy of Sciences, and the Cresson Gold Medal in 1914 from the Franklin Institute. In 1884, at 42, Rayleigh presided over the Montreal meeting of the British Association for the Advancement of Science.

Sir William Ramsay (page 527) was so closely associated with the work of Lord Rayleigh that one can hardly be mentioned without the other. Born in Glasgow, Ramsay was primarily a chemist, and won the Nobel prize in this field in 1904, the same year that Rayleigh won it in physics.

Both men were deeply interested in abnormal psychology and members of the Society for Psychical Research, of which Rayleigh was a president.

Their work on argon led Ramsay and Prof. M. W. Travers to the finding of helium, neon, krypton, and xenon. These are chemically inert elements which exist in the earth's atmosphere, some in very small quantities.

Neon is the essential ingredient of the familiar "neon signs." The gas gives off a bright red glow when an electric current is passed through it.

Helium had been found in the sun in 1868 but Ramsay first discovered it on the earth. He found that it was given off by certain minerals when heated. Today, obtained in large quantities from natural gas, helium is widely used in dirigibles, since it is nonflammable and nonexplosive.

These qualities led to the choice of helium for inflation of the National Geographic Society-U. S. Army Air Corps stratosphere balloon *Explorer II*, which set a still unbroken altitude record for human flight, 72,395 feet, on November 11, 1935.

About 250,000 cubic feet of helium were used, expanding to 3,700,000 cubic feet at maximum altitude. Use of helium enabled [illegible] A. Anderson [illegible] collecting data of great value to aeronautical science.

Lord Rutherford (1871–1937); Sir J. J. Thomson (1856–1940)

ERNEST RUTHERFORD was born near the little town of Nelson, in the north of the South Island of New Zealand. His grandfather had sailed from Dundee, Scotland, in 1842 with his family, among whom was James, a boy of three, Rutherford's father.

Rutherford's parents belonged to the best type of emigrant pioneer. His mother was a schoolteacher, and there was always a special link between her and her son.

Rutherford once said to a school friend that, had he not won from the country parish a scholarship which took him to Nelson College, he would have been a farmer and never realized his special gifts. From Nelson a second scholarship took him to Canterbury College at Christchurch, New Zealand.

He was digging one day when his mother came out to impart the joyous news that he had won a third scholarship which would take him to Cambridge. Flinging away his spade, he said, "That is the last potato I'll dig."

When he arrives at Cambridge, fortune smiled on him. He was welcomed to the Cavendish Laboratory by its distinguished director, Sir Joseph J. Thomson, who rediscovered the electron in 1897 and whose work on the structure of the atom paved the way for Rutherford's later great contributions.

Rutherford was only 24 years old, but he soon began to make a name for himself. Dr. Andrew Balfour wrote of him, "We've got a rabbit here from the Antipodes, and he is burrowing mighty deep."

Within four or five months Rutherford was dining at the Fellows' table at King's among the elect. His fame had spread rapidly on account of his experiments on the detection of electric waves for long distances. Rutherford succeeded in transmitting electric waves for half a mile. These experiments were made before Marconi began his investigations on signaling by electric waves.

After lecturing at Columbia University, in 1902, he wrote, "I am the only worker in the field of excited radioactivity in the English-speaking world."

Rutherford's professorships in Montreal, Manchester, and Cambridge may be said to "correspond roughly with the three major phases of the development of atomic theory which will always be associated with his name," as Prof. R. H. Fowler points out.

For his work at McGill University in unraveling the intricate phenomena of radioactive change and the chemistry of the natural radioactive elements, he received the Nobel prize for chemistry in 1908. His 12 years at Manchester University are associated mainly with the discovery of the nucleus and the development of the nuclear model of the atom.

He passed the last 18 years of his life at Cambridge as Cavendish Professor. This third period culminated in 1932, the year which saw the discovery of artificial disintegration by protons, of the positron and of the neutron, the first and third Cavendish contributions.

These fundamental contributions of Rutherford and his associates helped to lay the foundations of nuclear physics, a new branch of physics, out of which grew the release of atomic energy and the atomic bomb.

As the representative of Britain beyond the seas, no more distinguished figure could have been chosen than Rutherford. His lack of formality endeared him to friends wherever he went.

Within a few years the subject of radium had captured men's minds, and Rutherford's services were in great demand. He received offers of professorships from Yale, Columbia, and Leland Stanford. He was awarded the Rumford Medal of the Royal Society, the Barnard Medal, the Franklin Medal, and many honorary degrees.

The career of Rutherford was launched under happy auspices through the friendship of Sir Joseph J. Thomson, who developed the Cavendish Laboratory which later was headed by Rutherford. Thomson won the Nobel prize in physics in 1906.

Today's electronic age, with its "electric eye" tubes, radar, television, and countless other devices controlled by electronic tubes, is founded on Thomson's discovery that the electron is a negatively charged particle, a "corpuscle of electricity" as he called it.

Thomson was the first to show that the atom is made up of particles of positive and negative electricity, the nucleus having a positive charge while electrons with negative charges rotate around it. His work revolutionized the sciences of chemistry and physics.

One of Thomson's great contributions was his tremendous influence in the training of young physicists at the Cavendish Laboratory. During his tenure it was a mecca to which young men flocked from all over the world to sit at the feet of this great teacher.

When only 27, he was elected to the Royal Society. He is buried in Westminster Abbey.

The portrait of Sir Humphry Davy (page 510), by Sir Thomas Lawrence, and Oswald Birley's painting of Lord Rutherford are used by permission of the Royal Society; that of Sir William Ramsay (page 525), [illegible] Millbanke, is from the University [illegible] London, and Arthur Hacker's Sir Joseph J. Thomson is in the Cavendish Laboratory.

Three of These British Pathfinders of Science Won the Nobel Prize

Cowes: Cradle of Yachting

NO PLACE is more closely associated with the growth of yachting than Cowes, the Isle of Wight village which [illegible] Queen Elizabeth's time, has been a favorite [illegible]

Though [illegible] the word "yacht" [illegible] in the Dutch language [illegible] "to hunt," came *jaghtschip*, meaning [illegible]

For [illegible] the word came in 1660, when the Dutch presented the royal Monarch King Charles II [illegible] Pepys [illegible] in his diary that the King rose at 5 o'clock on the morning of August 15, 1660, to inspect his new toy on the Thames.

Several years earlier [illegible] Elizabeth's [illegible] launched at Cowes appears to have been the first English vessel constructed for a purpose other than warfare or commerce.

[illegible] reported that Commissioner Phineas Pett planned to build a [illegible] also for the King, which would outdo the Dutch craft.

The second yacht was afloat by the following spring. Then came a [illegible] the Duke of York [illegible] the *Bezan*, had appeared [illegible] so by 1661 the Thames boasted four yachts.

[illegible] the first record of a yacht race. In this contest the King [illegible]

More [illegible] yachts were built for the King and for others of the royal family, [illegible] of England, Ireland, Wales, and Scotland [illegible] Cowes [illegible]

On June [illegible] 1815, [illegible] gentlemen met in a London tavern and launched the Yacht Club, with headquarters at Cowes. In later years the roster was to include Boy [illegible] parles, and others of Europe's ruling [illegible]

When [illegible] in 1817 [illegible] the Royal Yacht Club [illegible] years later [illegible] the Royal Yacht Squadron. After it [illegible] yacht [illegible] throughout the world.

[illegible] little resemblance to the regatta in our [illegible] Most owners of Cowes regattas [illegible] because

incident of their annual stay at the seashore. Biggest event of the year was Regatta Week, [illegible]

[illegible] Solent, with yachts gaily dressed in bunting and their decks crowded with [illegible]

[illegible] sailors were racing off Cowes and elsewhere. Across the Atlantic, yachting was undergoing similar development, and in 1844 the New York Yacht Club [illegible]

The first world's championship race was arranged as a feature of the [illegible] in 1851. [illegible] of a 60-mile race around the Isle of Wight.

Representing the New York Yacht Club and the United States [illegible]

The race was sailed August 22, 1851, and *America* won by 18 minutes. [illegible] to the New York Yacht Club, where it has remained despite repeated efforts to return it to Britain.

The *America* ended its career as a [illegible] at the United States Naval Academy at Annapolis, where it was [illegible]

One of the most famous American challengers was Sir Thomas Lipton's [illegible] *Shamrock*, [illegible] After his *Shamrock V* was beaten in 1930, Sir Thomas [illegible] the following year.

[illegible] *Endeavour II*, but was defeated in 1934 by Harold S. Vanderbilt's *Rainbow* and again in 1937 by the American's *Ranger*.

Thus the America's Cup remains on the "wrong" side of the Atlantic, as English sportsmen view it. And the fantastic cost of building and sailing the tall, streamlined J-class sloops makes resumption of the America's Cup series an exceedingly dim possibility.

All over the world, however, sailing enthusiasts of all ages race and [illegible] the Royal Yacht Squadron at Cowes.

"When the Big Boats Come Out of Cowes Roads – In the Foreground Is *Endeavour II*, Last Britain Challenger for the America's Cup

A Very Gallant Gentleman– Lawrence Edward Grace Oates (1880–1912)

THE TRAGIC STORY of Scott and Amundsen's race for the South Pole, which was first published in the *Daily Mirror* in June 1912, is one of heroism and courage in the minds of people everywhere. Among the heroes who went with Scott and reached the South Pole on January 18, 1912, none deserves greater glory than the gallant gentleman, L. E. G. Oates, of the Inniskillings. [Text of Scott]

Oates was an ideal for Scott to look for in a man to go past for sledge haulage. Strength, good temper, and determination, he was the ideal choice for the job. He had conquered ill health as a youth and was invalided home from Ladysmith in the South African War.

The expedition established a base at Cape Evans on Ross Island and, early in November, 1911, while Scott was establishing the depots, the sledging party set off for the South Pole. Scott was accompanied on the final adventure were Dr. E. A. Wilson, Lt. H. R. Bowers, Petty Officer Edgar Evans, and Capt. Lawrence Oates. The journey outward was fraught with great difficulties, and all were very exhausted.

They arrived at the South Pole on January 18, 1912, only to find Amundsen had arrived on November 14, 1911, and had reached the South Pole on December 14, 1911.

The party changed their minds, now with the message that they were not the first to reach the Pole was overwhelming, and they were [illegible] on their return journey to the base camp. Progress was slow because of soft snow and extremely low temperatures. Soon Oates began to show signs of the effects of the severe cold and long journey. Oates died on February 17. Next day the four survivors reached depot and their hopes rose considerably. Weather conditions, however, continued to be very unfavorable.

Oates suffered greatly from frostbite and, to help the company, the speed of the party was much reduced.

Extracts from Scott's diary tell the story: "*Jan. 24.* [illegible] for the day was [illegible] and [illegible] *March 1.* This Oates [illegible] *March 5.* Poor Oates [illegible] sleeping bag.

[illegible] *March 6.* [illegible] Oates [illegible] the party [illegible] every day.

"*March 7.* He is wonderfully brave. We still talk of what we will do together at home. *March 10.* He has rare pluck and [illegible] he can never go through. *March 12 and 14.* Now we're home as well as [illegible] with [illegible] . . . I shall be [illegible] what it will be [illegible] *March 17.* He [illegible] awful [illegible] he [illegible] we [illegible] Yesterday he was worse and we know he can't last long.

Shortly after [illegible] Oates' last thoughts were of his mother. Scott's diary records: "He [illegible] in thinking that he [illegible] way in which he met his death.

"We are [illegible] to his bivouac. He has been in great suffering for weeks without complaint and to the very last was cheerful and willing to [illegible] he was a [illegible] and [illegible]

He [illegible] last moving for 3 days, for a [illegible] in the morning [illegible] Oates [illegible] "I am just going outside and may be a long time."

He went out into the blizzard and we have not seen him since. . . . We know that Oates was working to a death that he knew was close on us. We knew he was out of a tent [illegible] We shall [illegible] he end with a smile [illegible]

The three survivors fought on for another [illegible] days but the blizzard was too strong to permit them to reach the depot, although they were [illegible] miles away. On March 29, Scott wrote:

Scott wrote at the end of his last message: "Had we lived, I should have had a tale to tell of the hardihood, endurance and courage of my companions which would have warmed the hearts of every Englishman. These rough notes and our cold bodies must tell the tale, but surely, amid a rich country like ours will see that those who are dependent on us will be properly provided for."

A memorial [illegible] was erected to the memory of Scott and his colleagues by Herbert Hoover, a member of the Norwegian party: "It is [illegible] to Amundsen [illegible] to Scott's courage."

[illegible] Oates [illegible] Antarctica named Oates Land. [illegible] 1912 by Scott's expedition under Capt. [illegible] R.N. [illegible] Land, a [illegible] stretch of coast [illegible]

[illegible] A Very Gallant Gentleman by John Cherry-Garrard [illegible] Publishers, London, Canada [illegible]

"Greater Love Hath No Man Than This, That a Man Lay Down His Life for His Friends" John 15:13

The Battle of Jutland, May 31, 1916

TERMED the greatest naval battle in modern times, the Battle of Jutland, or the Battle of the Skagerrak, as the Germans know it, was fought 83 miles west of Denmark. In it 250 ships contested for mastery of the seas.

Both sides claimed it as a victory, but after it was over the German Fleet was forced to seek its base and never sallied in World War I [illegible] battle with the British Navy.

In fact, Jutland was the only occasion when the rival fleets met in the course of [illegible] They were in contact for eight hours [illegible] Germans lost 2,21.

[illegible] Admiral [illegible] Scheer, [illegible] the German High Seas Fleet [illegible] Wilhelmshaven [illegible] the Norwegian coast in the early hours of May 31. The British Admiralty, thanks to its efficient secret service, was aware that something unusual was taking place in Heligoland Bight and ordered Vice Admiral Sir [illegible] Admiral Sir John Jellicoe, British Commander-in-Chief, kept his Grand Fleet [illegible] 70 miles to the north.

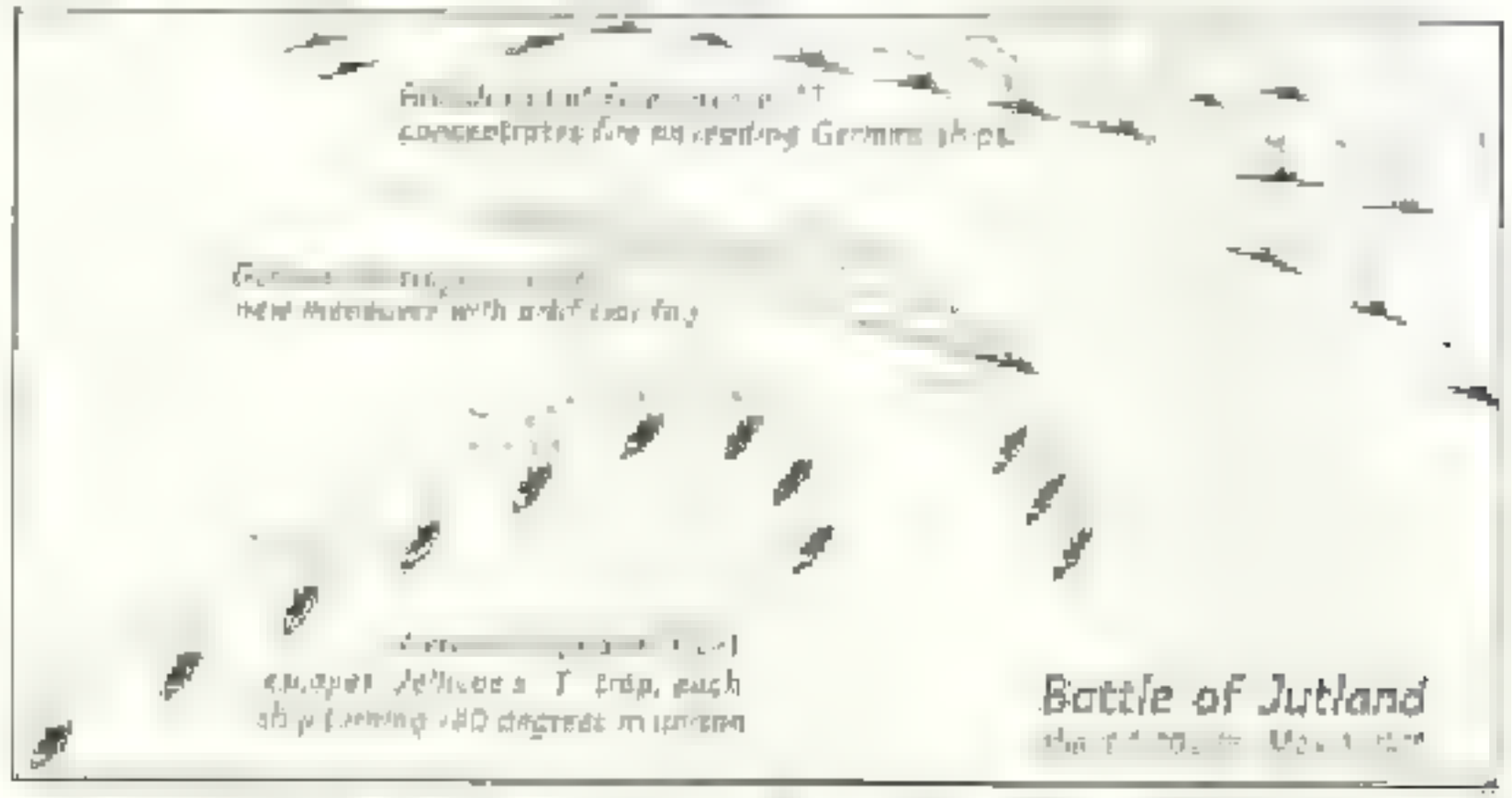
It was lucky for the Germans that the long running fight between the scouting forces did not take place [illegible] when the Grand Fleet would [illegible]

[illegible] Jellicoe's 24 ships, would have [illegible] had not been for the heroism of Maj. [illegible] W. Harvey of the Royal Marines who, although mortally [illegible] magazines and shields saved his ship, [illegible]

Up to 6:20 p.m. the advantage was undoubtedly Scheer's, for he had destroyed [illegible] British ships [illegible] Jellicoe. However, [illegible] the unsuspecting German vanguard of the Grand Fleet.

Suddenly, at 6:24, shells fell around Scheer's leading ships and he found he was heading into a trap set by Jellicoe. The British Fleet had crossed the "T" by massing battleships across the advancing German [illegible]

Based on previous battles, an overwhelming victory would have been Jellicoe's. But Scheer [illegible] seen in naval tactics because of danger of collision. In it [illegible] Within a few minutes his fleet had retreated out of range. [illegible] one by one, would have been destroyed as each made its turn at the head of the snakelike column and came under the concentrated British [illegible]



[illegible] Jellicoe [illegible] the German [illegible] artificial fog which screens them from the British gunners on the horizon.

Jellicoe [illegible] Sea Fleet slipped through the Battle [illegible] escaped.

After Germany's defeat at Jutland, she attempted to [illegible] declare war, April 6, 1917.

The German High Seas Fleet put to sea for the last time when 70 ships [illegible] November 21, 1918. Seventy-two of the interned ships were sunk or beached by their German crews in Scapa Flow.

Sir Alexander Fleming and Penicillin

AT THE PENICILLIN [illegible] the [illegible] covery by Sir Alexander Fleming was "descended" from a spore that blew in through a window at St. Mary's Hospital, near Paddington Station, in 1928.

[illegible] the contamination of a culture plate by spore—to use Fleming's own words—"is usually regarded as a reflection on the technique of the bacteriologist."

Fortunately for mankind, Fleming did not throw away the culture plate, on which he had noticed "a greenish-blue mold colony growing at the edge."

Chance and luck play a large part in human affairs, but, as Pasteur [illegible] the prepared mind. In this case there was an exceptionally well prepared mind waiting for just such a stray spore.

When Fleming's attention was first arrested by the unknown mold spore, he had no suspicion that this was the beginning of the most powerful antibacterial agent which had yet come to light. He discovered that this mold [illegible] more powerful than carbolic acid in retarding the growth of many of the common microbes, and yet was apparently harmless to human cells. This antibacterial substance, produced by a mold of the genus *Penicillium*, he called penicillin.

Medical [illegible] before the outbreak of war in 1939 an Australian Rhodes scholar, Howard Walter Florey. Florey [illegible] gation of substances capable of destroying harmful microbes. Both Mr. and Mrs. Florey were medical graduates of Adelaide University.

Electing to concentrate on penicillin, they obtained some of Fleming's culture. The costly undertaking was beyond their means, but they [illegible] Foundation.

They [illegible] stabilized, so that treatment, first of mice and then of men, could be [illegible] arose how to obtain adequate supplies for the fighting forces.

[illegible] example—there were many such incidents in World War II—of what [illegible] British Army [illegible] tells [illegible] when [illegible] proved highly useful in dealing with such minor complaints as [illegible] and sore throats.

Fleming has pointed out that penicillin is not a panacea. Nevertheless, [illegible] science as those begun by Jenner, Pasteur, and Lister.

The saga of the development of penicillin into one of the most effective weapons in fighting disease is inspiring because of the spirit of altruism displayed by Fleming and his co-workers. They refused to regard [illegible]

[illegible] *British Medical Bulletin* [illegible] Wellcome [illegible] Medical Research Council [illegible] to test [illegible]

Ethel Gabain's painting of Sir Alexander Fleming at work in his [illegible] Imperial War Museum.

Sinking of the *Bismarck*, May 27, 1941

UNABLE [illegible] to realize the possibility of a great blow against the German Navy with the resources at hand [illegible] in World War II [illegible] with [illegible] and [illegible] and [illegible] and [illegible] and hitherto-to-kill 50,000-ton ships as *Bismarck* and *Tirpitz*.

[illegible] of British [illegible] was [illegible] the [illegible] [illegible] over the [illegible] The [illegible] of German [illegible] between Iceland and Greenland in May, 1941, instantly had its effect on the British Home Fleet [illegible]

The [illegible] *Bismarck* was sighted by a patrolling [illegible] on the misty ice edge of the Denmark Strait, between Greenland and Iceland. [illegible] H.M.S. *Hood*, [illegible] with *Bismarck*, the *Hood* was [illegible]

Seconds [illegible] trouble [illegible] *Bismarck* [illegible] *Hood* was destroyed, 6 o'clock on the morning of Saturday, May 24, 1941.

After her tremendously successful hit, *Bismarck* disappeared in the Atlantic fog. Scheer at Jutland had the North Sea to hide in from [illegible] *Bismarck* [illegible] the wind. North Atlantic [illegible] that near home again she would gain the protection of Hitler's submarines and planes. The hunt was on, in heavy weather and rough seas, seas so rough that the deck of the British aircraft carrier *Ark Royal*, was [illegible] and [illegible]

[illegible] *Bismarck* [illegible] for the French ports. Soon wave after wave of bombers and planes from *Ark Royal* was off for the attack.

"[illegible] the aircraft came near the *Bismarck*," quoting Admiral Sir John [illegible] a thick bank of cloud with base about 700 feet [illegible] had therefore to be made by sub-flights or pairs of aircraft over a long period in the face of intense and accurate fire; they were [illegible] of the *Bismarck*.

There is now no doubt that it was the fortunate hit by one of the aircraft from the *Ark Royal*, on the evening of May 26, which enabled the British Commander-in-Chief to bring the *Bismarck* to action next morning. The *Bismarck*'s rudder has been damaged; she was out of control and kept turning in large circles. Her plight was now desperate.

For the first time in naval history, a carrier-based plane had virtually [illegible]

It was announced on board that the Führer would confer "the Knight's insignia of the Iron Cross" on the man who succeeded in freeing the rudders. The strain now began to tell on the crew, many of whom had been without sleep for five days and nights. At that moment came this message from Hitler, "All our thoughts are with our [illegible]

His [illegible] reply "[illegible] We shall fight to the last shell," cannot have allayed the growing anxiety of Berlin.

After a night of heavy seas, rain squalls, and low visibility came the dawn of [illegible] May 27. The *Bismarck* came in sight of the British at 8:43, and H.M.S. *Rodney* and *King George V* opened fire. The *Bismarck* was finally sunk by torpedoes from the cruiser H.M.S. *Dorsetshire*, some 550 miles due west of Brest at 10:37 a.m.

"The *Bismarck*," writes Admiral Tovey, Commander-in-Chief of the Home Fleet, "had put up a most gallant fight against impossible odds, worthy of the old days of the Imperial German Navy, and she went down with [illegible] colours [illegible] *Dorsetshire* picked up [illegible] and 75 ratings; *Maori* picked up 24 ratings; but at 11:40 *Dorsetshire* [illegible] which might have [illegible] ships were [illegible] rescue."

The [illegible] *I [illegible]* [illegible] of the sinking of the *Bismarck* makes moving reading. It records one of the turning points of the war. Not till the United States entered the war six months later was there such rejoicing in British hearts.

The Germans sent *Tirpitz* to Norwegian waters when completed in 1941. There she lay until RAF Lancasters with 6-ton Earthquake [illegible] sank her near Tromsø, November 12, [illegible]

[illegible] painting "Sinking of the *Bismarck*" was [illegible] for the Northern Pump Company of Minneapolis, Minnesota, from whose collection it was loaned for use in this series.

Sir William Gilbert (1836–1911) and Sir Arthur Sullivan (1842–1900)

ENGLAND has produced no immortal grand opera, no world-renowned symphonies, no considerable number of unforgettable folk songs; yet it has given to musical literature in the light operas of Gilbert and Sullivan an enduring contribution as peculiarly and distinctively British as roast beef and Yorkshire pudding or tea and toffee.

Exemplifying the true Englishman's ability to laugh at himself, the Gilbert and Sullivan operettas lampoon without malice the foibles and frailties of the British and for that matter of all mankind. Their hilarity is so infectious and has such wide human appeal that, like Tennyson's brook, they go on forever.

Throughout the British Empire, the United States—in fact, wherever English is spoken, music and dramatic clubs, colleges and high schools keep the memory of Gilbert and Sullivan forever green by putting on periodic performances of *The Mikado*, *H.M.S. Pinafore*, *Pirates of Penzance*, *Trial by Jury*, *The Gondoliers*, *The Sorcerer*, and *Iolanthe*. Probably thousands of readers of this MAGAZINE have personal recollections of taking part in some production of Gilbert and Sullivan.

No more ill-assorted pair ever collaborated for the theater than the librettist William Gilbert and the composer Arthur Sullivan. Because of a caustic and often devastating wit, Gilbert got on rather badly with many people. He was a hard worker, reticent and exacting, inclined to shun social affairs. On the other hand, Sullivan, easy-going and amiable, was popular in society.

Despite their differences of opinion, however, 13 of the 14 operettas they did together were successful. Sullivan gave Gilbert full credit for making the chorus for the first time in theatrical history an integral part of the opera, and Gilbert praised Sullivan as the only composer who could bring out with his music the real lilt and rhythm of English song lyrics. When either worked with another collaborator, the results were never up to the standards set by their joint efforts.

Sullivan was a wonderful melodist and he would have gained a measure of lasting fame even if he had never composed an operetta. His glorious tune *Onward, Christian Soldiers*, written when he was editor of the Church of England *Hymnal*, will be sung as long as churches stand. While sitting by the deathbed of his brother Frederic, he composed the music of the exquisite song *The Lost Chord*, perennial favorite of soloists.

In 1875 Richard D'Oyly Carte, then acting manager of the Royalty Theater, asked Gilbert to write him a libretto to be set to music by Sullivan, and Gilbert promptly responded. According to Sullivan's account, "The words and music were written, and the rehearsals completed, within the space of three weeks." The operetta *Trial by Jury* had its premiere on March 25, 1875. An immediate success, it ran for the rest of the year. The famous partnership of Gilbert and Sullivan and D'Oyly Carte was under way, and the phrase "Gilbert and Sullivan" became a trade-mark.

H.M.S. Pinafore, or, The Lass That Loved a Sailor, "An Entirely Original Nautical Comic Opera in Two Acts" by Gilbert and Sullivan, opened in 1878. *Pinafore* had an initial run of some 675 nights, and it has been running off and on somewhere ever since.

The Pirates of Penzance, or, The Slave of Duty, opened on December 31, 1879 in New York. When the *Pirates* had run about a year, it was succeeded by *Patience; or Bunthorne's Bride*. Carte, now prosperous, built the Savoy Theater especially for the Gilbert and Sullivan operettas and moved *Patience* there in the midst of its run of 408 nights. This theater was the first in London to be lighted with electricity, and Carte had to advertise that it was equipped also with gas for use in case the electric lights failed. It seated only 1,300; yet it proved a veritable gold mine.

Sullivan suffered for most of his life with a kidney ailment which put him to bed [illegible] His beloved mother died in May, 1882, when Sullivan was composing one of his gayest scores, *Iolanthe; or, The Peer and the Peri*. Moreover, as he went into the pit to lead the orchestra on the opening night of *Iolanthe*, he received word that his drapers had gone bankrupt and he was penniless. He conducted the performance as if nothing had happened.

Before *Iolanthe* had completed its 14-months run, Sullivan was knighted in May, 1883. Gilbert was passed over; he did not receive the honor until 1907. Undoubtedly the knighting of Sullivan was the beginning of the rift between the collaborators.

The Mikado; or, The Town of Titipu, opened at the Savoy on March 14, 1885, and ran for 672 nights. Since then it has been almost constantly on some stage somewhere.

In December, 1889, was presented Gilbert and Sullivan's *The Gondoliers; or, The King of Barataria*. About this time there was a quarrel over a new carpet which Carte had ordered for the Savoy. Sullivan sided with Carte. The librettist and the composer were hardly on speaking terms thereafter.

"Do Not Ask Me Either If It Is Necessary Or If I Marry of Course"

"I Have Nothing to Offer But Blood, Toil, Tears, and Sweat"

Winston Churchill (1874——)

FITTINGLY, THE PORTRAIT of Winston Churchill which faces this page shows him in the "siren suit" he wore in World War II. It will remind later generations of Churchill, the embodiment of the fighting spirit of John Bull.

Whenever there was danger and destruction in the dark days of the Battle of Britain, he was certain to appear and to spread confidence by his presence. He flew thousands of miles to confer with his allies, to cheer the men at the front, to attend meetings of strategy boards.

In his flights he traveled in a pressurized chamber facetiously called the "Easter egg." It was designed for his use because his doctors warned him that it would be unsafe for him to fly at heights above 8,000 feet.

No one who was in London during the spring and summer of 1940 will ever forget those months. The swift Nazi moves when Hitler first set his war machine in motion and the withdrawal of the British forces from Norway, after the ineffectual efforts of the Government to stem the German rush, had caused gloom throughout the land.

English spirits soared when the rugged, fearless, outspoken Churchill succeeded Chamberlain as Prime Minister.

Churchill at once managed to put over his rugged and indomitable personality on the radio. In those first critical months I watched anxious groups gathered around the loudspeaker in England, in the United States, and in Canada. His audiences stood spellbound listening to his biting remarks about the Nazis and Hitler.

Surely no other leader in history has ever more successfully instilled into his hearers his own supreme confidence. Even in the gloom months after Dunkirk, when England was expecting invasion at any moment, the British people shared Churchill's belief that our cause would triumph—though how we should pull through we did not know.

Winston Leonard Spencer Churchill was born on November 30, 1874, at Blenheim Palace, the home of his great ancestor, the Duke of Marlborough, victor at Blenheim (1704). At Cowes in the Isle of Wight his father had fallen in love at first sight with Jeannette, the daughter of Leonard Jerome of New York, proposed to her the following day, [illegible] impatiently by the young lovers but insisted upon by both families.

It was a happy stroke of fate that gave an American mother to the man who was destined to lead England in the trying time when that country and the United States joined arms against a common foe.

Winston's first venture outside the family circle was his sojourn at a private school at Brighton, where his schoolmistress described him as "the naughtiest small boy in the world." He [illegible] supposedly delicate health, yet the teacher found him far from lacking in liveliness. School years at Harrow followed Brighton.

After leaving the Royal Military Training College at Sandhurst, Churchill obtained a commission in the 4th Hussars, and within a year went out during leave to Cuba, where he obtained his first glimpse of war. He wrote articles at £5 each for the *Daily Graphic* and returned to England with the Spanish military medal.

With periods of campaigning on the northwest frontier of India and in the Sudan behind him, he served conspicuously in the South African War. His adventures in that campaign and his dispatches to the *Morning Post* brought him into the limelight.

As First Lord of the Admiralty he helped to prepare the Royal Navy for World War I. The ups and downs of politics tossed him about for the next few years. With marked success he turned his hand to writing—his masterpiece was the life of his ancestor, the great Duke of Marlborough—to painting in oils, and even to brickbaying on his property in Westerham.

From the early days of flying Churchill took a keen interest in this new development. During the years of appeasement he continuously demanded a great expansion of the RAF to meet the German menace; but his warnings were unheeded. As Prime Minister he took every opportunity of identifying himself with the boys of the RAF and of visiting their messes. He was appointed honorary Air Commodore of RAF 615 Fighter Squadron Unit.

On August 20, 1940, when speaking of the small band of fighter pilots defending England, Churchill used these memorable words: "The gratitude of every home in our island, in our Empire, and indeed throughout the world, except in the abodes of the guilty, goes out to the British airmen, who, undaunted by odds, unwearied in their constant challenge and mortal danger, are turning the tide of world war by their prowess and by their devotion. Never in the field of human conflict was so much owed by so many to so few!"

For the crowning mercy of the victory of the Battle of Britain, humble and hearty thanks were rendered throughout the entire English-speaking world. It was Winston Churchill who heartened people to win that victory.

The Cow That Wore This Hide Helped Jenner Conquer Smallpox

[illegible]

Our Search for British Paintings

By Franklin L. Fisher

EARLY IN 1947 the National Geographic Magazine planned to present the highlights of Great Britain's contributions to Western civilization.

This amazing story follows naturally the earlier National Geographic portrayals of "Daily Life in Ancient Egypt," "Greece—the Birthplace of Science and Free Speech," and "Ancient Rome Brought to Life," which delved into the remoter sources of Anglo-Saxon and American institutions.*

To search the British Isles for authentic paintings of the subjects decided upon, I took ship for London in July, 1947. There I first conferred with Sir Evelyn Wrench, founder of the English-Speaking Union, who had been invited by Dr. Grosvenor to contribute the lead article.

Start of a Hunt for Pictures

With Mr. and Mrs. Thomas Garner James, who had been helping Sir Evelyn collect data for his article, I visited museums and galleries, ferreted out private collections, and consulted experts in English history and historical paintings. Among these was Sir Walter Lamb, Secretary of the Royal Academy of Arts, who introduced me to artists and paintings which seemed to him suited to our need.

In London I met also Mr. Frank O. Salisbury, R. P., whose famous murals of British historical subjects decorate the walls of the Royal Exchange. He has painted portraits of many important persons.

I was received by Mr. Salisbury in his combination residence, studio, and art gallery, which is one of the most extraordinary residences I have ever had the opportunity to see. The house faces Hampstead Heath in London and was built just before the last war. Designed by the architect to meet the artist's specifications, it has many unusual features, notably well-lighted wall space in all the main rooms for the exhibition of Mr. Salisbury's pictures.

The entrance with its grand stairway suggests a residence of a high government official. As might be expected, the color tones of rugs, walls, and decorations are combined for harmonious effect. At the top of the stairway is the formal drawing room and down a few steps to another level is the studio, which is especially well lighted and contains racks and cases for the storage of sketches and canvases.

Few pictures were in evidence here, but Mr. Salisbury brought out portrait studies of Franklin D. Roosevelt and President Truman and showed them one at a time on an elaborate easel. He also showed me a portrait study of the Princess Elizabeth for which he had been granted special sittings, but which at that time had not been completed. He was a most gracious host.

Mr. Salisbury's latest portrait of Mr. Churchill appears as page 540 and shows him in the "siren suit" he wore in World War II. A thumbnail description reads as follows:

"The Rt. Hon. Winston S. Churchill, P. C., M. P., by Frank O. Salisbury, painted during the strenuous war days in 1942. Exhibited at the Royal Academy, Royal Portrait Society's Exhibition, November, 1942. Presented by members of the Devonshire Club to Mr. Churchill as a token of admiration. Replica presented to Harrow School."

In the Cavalry Club, 127 Piccadilly, I found the magnificent painting of Captain Oates, of Scott's South Pole expedition. The picture, carrying the modest title of "A Very Gallant Gentleman," was painted in 1913 by John Charles Dollman, R. B. C. (1851-1934), a prolific painter of historical subjects who exhibited at the Royal Academy from 1872 to 1904. It is reproduced by courtesy of the Cavalry Club and Thos. Forman & Sons, Ltd., Nottingham, owners of copyright.

Capt. Lawrence Edward Grace Oates was an officer of the Inniskilling Dragoons and a member of this club.

No picture could illustrate more effectively the story of Britain's intrepid explorers who for centuries have searched out the secrets of geography. It is an oil on the canvas of large dimensions (page 531).

Another picture found in a London club was William Clarkson Stanfield's "Battle of Trafalgar," which hangs in the United Service Club at 116 Pall Mall (page 505). This artist (1793-1867), a sailor in youth, later painted theater scenery and eventually was elected to the Society of British Artists and the Royal Academy. He was commissioned to paint the picture for the senior United Service Club in 1836, when that club, first of London's organizations of this character, was 21 years old.

This is a large canvas, occupying one side of a great stair well surmounted by a glass dome. A companion canvas on the opposite

* See the National Geographic Magazine for October, 1941, March, 1944, and November, 1946, respectively.

side was destroyed by a bomb in the London blitz. Indeed, many paintings which had been considered suitable for this series were found to have been destroyed by the bombing during World War II.

Among the private individuals who gave access to their paintings was the Rt. Hon. Sir Charles Trevelyan, Bart., who owns the mural by William Bell Scott, A. R. S. A. (1811-1901), "Building a Roman Wall." Sir Charles served 30 years in Parliament and is the elder brother of Sir G. M. Trevelyan, the noted Cambridge University historian.

This painting, page 446, opens the series as the earliest example of English accomplishment, although Britain then was under control of Roman invaders. The picture is in Wallington Hall, Northumberland.

Cherished Paintings Offered for Series

Many British institutions of learning lent their cooperation and cherished paintings for our project. The City Art Gallery at Bristol, through the courtesy of the artist's widow, allowed us to reproduce its fine painting by Ernest Board, R. W. A. (1877-1941), of the Cabots setting out on their voyage to America, which appears as page 461. The Royal College of Surgeons made available its picture of Henry VIII confirming the act of union to the Barbers and Surgeons, after Holbein, with only the request that we state that it hangs in the College and is reproduced by permission of the president and council (page 463).

Very appropriately at Plymouth hangs the picture of Sir Francis Drake receiving surrender of the Andalusian flagship. By John Seymour Lucas, R. A. (1849-1923). It is in the City Museum Art Gallery, Tavistock Road, Plymouth, through whose courtesy and that of the artist's son, who inherited most of his father's copyrights, it is reproduced as page 465.

Lucas was a constant exhibitor at the Royal Academy of pictures showing historical subjects, including many of the Tudor and Stuart periods. Another of his works, to represent British achievement in architecture, is the picture of King Charles II and Sir Christopher Wren (page 483), which hangs in the Laing Municipal Art Gallery, Newcastle, England.

The dramatic marine scene, "Embarkation of the Pilgrims," by the American Edward Moran, A. N. A. D. (1829-1901), shows the *Mayflower*, a 180-ton vessel, leaving Southampton on August 5, 1620. The artist was a weaver by trade, but developed his talent for painting at an early age. He especially liked to paint marine scenes and greatly admired the work of William Clarkson Stanfield, whose painting of the "Battle of Trafalgar" is shown on page 505.

I located Moran's painting at the U. S. Naval Academy Museum, Annapolis, to which it was presented by Mr. Paul E. Sutro of Philadelphia in 1940. It is on permanent exhibition in the main display room at the museum (page 472).

There are many pictures of Oliver Cromwell, but chosen for our plate, page 476, is the one by Ernest Crofts, R. A. (1847-1911), showing Cromwell as a victorious general at the head of his troops after the Battle of Marston Moor.

This is owned by the town of Burnley, Lancashire, and was exhibited at the Royal Academy in 1909. It is published by permission of Corporation Art Gallery and Museum, Towneley Hall, Burnley.

The most effective picture of blind John Milton I located in the New York Public Library, to which a wealthy patron, Robert Lennox Kennedy, had given it in 1879. It was painted by Michael von Munkacsy (1844-1900) and is one of this distinguished Hungarian artist's best pictures (page 479).

When located, the canvas was in a bad state of preservation. The library's trustees kindly arranged to have it cleaned and restored for reproduction. To accomplish this, the picture was removed to the restorer's studio in Brooklyn. I was pleasantly surprised to learn of this through a news photograph in the *New York Herald Tribune* last summer, which showed the huge canvas being carried out of the library for this operation. We were waiting patiently for word that the restoration had been accomplished when we saw this photograph (page 540).

The Late N. C. Wyeth Represented

To represent the work of the great English storyteller, Daniel Defoe, whose *Robinson Crusoe* is still a best seller at Christmas time, the painting by the Late N. C. Wyeth (1882-1945) entitled, "For a Mile or Thereabouts My Raft Went Very Well," was chosen. The picture is reproduced as page 481 by permission of the David McKay Company, of Philadelphia, from the Wyeth edition of *Robinson Crusoe*.

It hangs at present with a number of others by Wyeth illustrating the Crusoe story in the children's room of the Wilmington Institute Free Library, Wilmington, Delaware. This library purchased the collection from the artist some years before his recent untimely death in order to have examples of his art in the vicinity where he lived and worked.

Wyeth's home was at Chadds Ford, Penn-

sylvania, near by. He was a member of that great school of American illustrators who studied in Wilmington under Howard Pyle. Some of his fellow students were Taunton Oakley, Clifford Ashley, Maxfield Parrish, Harvey Dunn, Stanley M. Arthurs, George Harding, and Frank E. Schoonover.

London Galleries Yield Many Scenes

The great art galleries of London were a prolific source of the pictures we wanted. The Tate Gallery provided the painting by the American, John Singleton Copley, R. A. (1738-1815), of the collapse of William Pitt the elder (Lord Chatham) in Parliament, where he was arguing the cause of the American Colonies. The picture is called "The Death of Pitt," although Pitt did not actually die until some time later, at his country seat in Kent (page 487). Reproduction is by courtesy of the trustees of Tate Gallery.

To represent British painters, I chose a work by William Hogarth (1697-1764). The official title of this picture, which appears as page 489, is "The Life School in Peters Court, St. Martin's Lane." According to the records, it shows a scene in a school founded by Hogarth which occupied a room in Peters Court beside Tom's Coffee House in St. Martin's Lane, London. This studio, or school, ceased to exist with the establishment of the present Royal Academy, which fell heir to its anatomical figures, busts, and statues in 1768. This painting now hangs in the Royal Academy, Burlington House, London, and is reproduced by its courtesy.

The portrayal of John Wesley preaching at Sandhill, Newcastle (page 491), was painted by Wilson Hepple (1853-1937) and is owned by Sir Arthur Munro Sutherland, Bart., K. B. E., distinguished shipowner and coal exporter of Newcastle-on-Tyne (page 488), of which he was former Lord Mayor. The picture hangs in the Laing Municipal Art Gallery at Newcastle.

English inventors gave much to the world by helping to harness natural forces. James Watt, the Scottish boy, is shown on page 492 experimenting with steam in the family teapot in this human-interest painting by Marcus Stone, R. A. (1840-1921). Watt helped make England a great manufacturing country.

The artist had a friend and patron in Charles Dickens and did the illustrations for *Great Expectations* and drawings for *Little Dorrit* and *A Tale of Two Cities*. He was known as a pictorial teller of short stories, and his pictures are valued as romantic and idealistic.

An example of a picture painted especially for this series is that of General Wolfe (page 494), whose military success at Quebec was responsible for the fact that most of North America speaks English instead of French. Andrew Wyeth, son of the famous illustrator N. C. Wyeth and a successful painter in his own right, conceived this striking portrait of Wolfe on the Heights of Abraham above Quebec. This spot proved to be the key to the otherwise impregnable city. Its capture was the turning point in the battle, and, although both Wolfe and his opponent Montcalm were mortally wounded there, Wolfe's victory was decisive and had far-reaching consequences.

The striking picture of Capt. James Cook was located in Australia, of which he was the real discoverer. In 1902 the trustees of the National Gallery in Melbourne commissioned the Australian born Emanuel Phillips Fox (1865-1915) to execute this work, reproduced here through their courtesy as page 498.

The artist attended the National Gallery Schools in Australia before going to Paris to study at the Academie Julian and the Beaux-Arts under Gérôme. He was a portraitist, landscapist, and painter of scenes from everyday life. He was elected a member of the New Salon, Paris, in 1910, and is represented in all the Australian galleries.

Famous Medical Men Included

The world owes a debt of gratitude to a long list of English medical men. Pictures of several of the eminent appear in this series. John and William Hunter were anatomists whose dissections of the human body left it with few secrets. Formal portraits of both brothers were available, but I chose the picture of William lecturing, by John, or Johann, Zoffany, R. A. (1733-1810), because of its illustrative quality (page 500).

Edward Jenner studied under John Hunter at St. George's Hospital, London. I visited this hospital for a vaccination and discovered on the wall of the laboratory, in a frame under glass, the well-preserved hide of the cow Jenner used to provide the vaccine for his first patient (page 542). The small boy, James Phipps, is shown with him in our painting of this event (page 503).

The artist, Ernest Board, was an English mural painter. He is represented also by the picture of the Cabots in Bristol (page 461).

Chosen as a pictorial tribute to the English poets is the painting (page 507) commemorating Lord Byron's visit to the U. S. S. *Constitution* in the harbor at Leghorn, Italy, by William Edward West, N. A. (1788-1857). Mr. Francis Breese Davis, Jr., former chairman of the board of U. S. Rubber Company

Removing the New York Library's "Blood Million" for Research on Wax a Heavy Task

[illegible]

They're OF! Over the First Fence in the 1938 Grand National Steeplechase at Aintree

and a widely known industrialist, owns the painting. It hangs in his residence on a South Carolina plantation near Charleston.

In describing the painting, Mr. Davis said:

"Lord Byron visited the U. S. S. *Constitution* at Leghorn, Italy, May 21, 1822. At that time his thoughts were directed towards America. Some warm admirers of *Childe Harold* invited him to visit the frigate. When he went on board, he received a salute, and few compliments ever gratified him so much.

"Byron's companions at that time in Leghorn, several of whom might have been on the visit to the *Constitution*, were: Trelawny, Shelley, Williams, Leigh Hunt, and the Countess Guiccioli.

"The artist, William Edward West, was often referred to as 'Kentucky West' to distinguish him from Benjamin West. He was born in Kentucky. He studied with Thomas Sully in Philadelphia and later visited Italy to continue his studies. He excelled especially in portraiture and painted many notable persons: Lord Byron, Washington Irving, the Countess Guiccioli, Perry H. Shelley, and others.

"This picture is not wholly accurate so far as details of the ship and personnel go, probably because West was not a marine painter and wanted, primarily, to depict the historical occasion."

Grace and Dignity of a Young Queen

Many pictures of Queen Victoria were considered, but none suited the purpose so well as Sir David Wilkie's painting of the young Queen presiding at her first council of state. This hangs in Windsor Castle and is the property of the English kings. It shows the Queen when at 18 years of age she held her first Council at Kensington Palace in 1837. Her grace and dignity on this occasion endeared her to all present.

In this picture the Queen is represented as seated at the head of the Privy Council table. She holds in her hand the most gracious declaration addressed by Her Majesty to the Lords and others of the Council then assembled. Among those shown at the far right of the picture are the Archbishop of Canterbury and the Duke of Wellington.

Sir David Wilkie, R. A. (1785-1841), had many commissions for portraits of distinguished persons, although the ladies he painted were not always flattered by his presentation of them. The official credit line for this picture reads, "Reproduced by gracious permission of His Majesty the King" (page 509).

Through Sir Walter Lamb I met Mr. A. R. Thomson, R. A., whom I engaged to paint the picture of Michael Faraday (page 511). This artist is a most unusual man, in that he has become a noted painter in spite of the serious physical handicap of being unable to speak or hear. My mission with him was accomplished through Mrs. Thomson, who acts as her husband's interpreter. He and she talked together by finger signs, and then she told me what was said. He is a handsome man of fine physique whose appearance would command attention anywhere.

Dickens and His Characters

In London's Dickens House, where relics of this great English literary figure are preserved, I found the painting by Robert William Buss (1804-?51), which shows the author in his study surrounded by sketches of the characters he created (page 507). A few weeks before the death of the artist he began this portrait of Dickens, seated in his library at Gad's Hill Place. Only the figure was entirely finished.

Many characters of Dickens's stories were only outlined on the walls. They give a dreamlike effect and suggest that the author is intent upon the plot for still another novel. Reproduction was arranged through the courtesy of the trustees of Dickens House, 48 Doughty Street, London.

John Collier's portrait of Charles Darwin hangs in the headquarters of the Linnean Society, which paid for it by subscriptions raised among its Fellows. A replica is in the National Portrait Gallery.

The Linnean Society, of London, through whose courtesy we reproduce this work as page 320, contributes an account of a letter which in May, 1881, Darwin wrote to one of its secretaries.

> It tires me a good deal to sit to anyone, but I should be the most ungrateful and ungracious dog not to agree cordially, supposing that enough is subscribed about which I have always felt very doubtful. If I am to sit, it would be a pure treat to sit to a good artist, and from all that I have heard I believe Mr. Collier is a good one. I should most *particularly* desire to sit to Huxley's son-in-law. If, as you say, he would like to paint me. Let me earnestly beg one thing of you, viz., that you will not permit any tout me for subscriptions. I always understood that my agreement to sit was contingent on the subscriptions not being.

John Collier (1850-1934) was the author of several books on the technique of painting and was the son-in-law of Thomas Henry Huxley, noted English biologist and one of Darwin's colleagues in scientific work.

Just completed for the Rhodes Trust is the pleasant, informal portrait study of the great South African pioneer, Cecil Rhodes (page

522), by James Gunn, a well-known member in England of the Royal Society of Portrait Painters. It shows Rhodes against a background of the African veld, with a suggestion of Table Mountain in the distance. Artist Gunn's portrait of the late American Ambassador Winant was in last year's Royal Academy exhibition.

Sir Philip Burne-Jones's portrait of the great English physicist, Lord Rayleigh, shows him at work in his laboratory. A copy is in the possession of Trinity College, Cambridge University, where it honors both the scientist and the English artist (1861-1926) who painted it. Our reproduction was made from the original which hangs in the Rayleigh family house, Terling Place, in Essex (page 534).

Portraits of four English scientists are presented on page 537—Sir Humphry Davy and Sir William Ramsay, chemists; Sir Joseph John Thomson and Lord Rutherford, physicists.

Sir Thomas Lawrence, P. R. A. (1769-1830), who painted Davy, was one of England's most famous portraitists; examples of his work hang in the picture galleries of the world. Lawrence was trained in the schools of the Royal Academy and became its president. So highly was he regarded that he was buried in St. Paul's Cathedral. The picture is owned by the [illegible], and [illegible] is here reproduced.

The portrait of Sir William Ramsay was painted by Mark Richard Milbanke [illegible] for the [illegible] the [illegible] Nov[illegible] 4, [illegible], [illegible] Sir Mark Milbanke, ninth Baronet, and younger brother of Sir John Milbanke, who gained the Victoria Cross in the South African War and was killed in action at the Dardanelles in 1915.

From early childhood Mark Milbanke had been passionately fond of drawing and of portrait painting and had studied art for some years at Paris, where at the Salon [illegible] exhibition he more than once gained [illegible]. His portraits, which were well painted and excellent likenesses, were frequently shown at the exhibitions of the Royal Academy and the British Portrait Painters.

The portrait of Sir Joseph John Thomson was painted by Arthur Hacker (1858-1919), another Royal Academician who portrayed many British personages. It was located in the Cavendish Laboratory at Cambridge.

Oswald Birley, R. O. I. (1880—), painted the portrait of Lord Rutherford which also hangs in the Cavendish Laboratory. It is on loan from the Royal Society, the officials of which made it available for reproduction here.

The artist was a student at Cambridge, but studied art in Dresden, Florence, and Paris. He is a New Zealander by birth, but has lived for many years in England, where he served in World War I as an intelligence officer. He is represented by pictures in the National Portrait Gallery, in Windsor Castle, and in the National Museum of Wales.

During the lifetime of Sir Thomas Lipton yacht races were a feature of British-American competition, and the public on both sides of the Atlantic took a keen interest in this rivalry. The waters around the Isle of Wight were the British center of such activities, shown by Charles Pears's painting, "When the Big Boats Come Out of Cowes Roads" (page 529).

Picture of World War II

Charles Pears, R. O. I., is president of the Society of Marine Artists and was an official British naval artist in both World War I and World War II. His work is well known in England, where it has been widely exhibited.

Montague Dawson, another distinguished English marine painter, prepared the picture of the "Battle of Jutland," World War I (page 533), especially for the NATIONAL GEOGRAPHIC MAGAZINE. It is diagrammatically correct and shows the unique naval maneuver carried out by the German ships that permitted them to turn about and escape. The artist has taken some license in showing the ships in closer formation than they actually were.

Mr. Dawson's other picture in this series, "Sinking of the *Bismarck*," World War II, was done for the Northern Pump Company of Minneapolis (copyright 1943), from whose collection it was lent for this reproduction (page 537). Some artistic license has been taken by the artist in this picture because the aircraft carrier *Ark Royal*, shown in the left distance, was 40 miles distant, and the Catalina aircraft had flown away when the explosion took place.

In London's Imperial War Museum we found Ethel Gabain's painting of Sir Alexander Fleming, discoverer of penicillin, at work in his laboratory (page 535). Mrs. Garner James, who went to call on the artist, found that she is Mrs. John Copley, a pleasant little lady employed by the Ministry of Information as a war artist at the beginning of World War II. She painted documentary pictures throughout the bombings of that period—the evacuation of the children from Gravesend, the girl lumberjacks in the north, ammuni-

He Posed as [illegible] and Lost His Face

[illegible] Magazine [illegible]

[illegible] workers [illegible]. He pictured Dr. Fleming [illegible] about 1942.

Dr. Fleming is shown in his laboratory at St. Mary's Hospital, Paddington, London, and the [illegible] which he holds in his left hand is [illegible] with [illegible] penicillin [illegible] (page 42).

While Mrs. Cooke was painting another picture in a hospital [illegible] she [illegible] the [illegible]. No one was [illegible] although patients were [illegible] and [illegible] the [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

"I was a little shaken," she said, "but I had to go on painting [illegible] and the same people were brought in just as if nothing had ever happened, and [illegible] of [illegible] [illegible] the world."

Mrs. Cooke is represented in galleries throughout the world and has received [illegible] awards for her portraits.

Pictures [illegible] [illegible] scene [illegible] [illegible] were not to be found. [illegible] this need [illegible] [illegible] in [illegible] the [illegible] the great American [illegible], Kenneth Riley.

The National Geographic [illegible] [illegible] [illegible] [illegible] [illegible] of Florence Nightingale [illegible] [illegible] she would appear as the "Lady of the Lamp" at the [illegible] at Scutari [illegible] the Crimean War (page [illegible]).

Riley [illegible] historical pictures and [illegible] [illegible] [illegible]. He [illegible] American [illegible], having studied [illegible] Thomas Benton at the Kansas City Art Institute and later at the Art Students League of New York.

During World War II Riley served as a combat artist with the U. S. Coast Guard and participated in the landings on Leyte, Kwajalein, [illegible], and Saipan. His [illegible] war [illegible] [illegible] of the National Gallery of Art, Washington, and elsewhere throughout the United States.

Mr. Riley [illegible] for the National Geographic [illegible] 1961 [illegible] (pages 456, 457 [illegible]).

[illegible] [illegible] [illegible] [illegible] [illegible] but [illegible] thing. So far [illegible] [illegible] series [illegible] ever [illegible] completed. [illegible] generations [illegible] both [illegible] and [illegible]

The Society's New Map of the British Isles

THE NATIONAL GEOGRAPHIC SOCIETY'S new Map of the British Isles, distributed to its 1,800,000 member-families as a supplement to this issue of the NATIONAL GEOGRAPHIC MAGAZINE, vividly brings to mind the key role of Britain in the epic struggle of World War II.*

Hundreds of place names on the new map recall episodes, great and small, of the days which found the "snug little isle" turned into a single base of operations against aggression.

London, Birmingham, Manchester, and Liverpool; Hull, Plymouth, and Bristol have added to their rich history the story of the Battle of Britain, in the late summer and fall of 1940. These cities unflinchingly endured one Nazi air raid after another, until angry swarms of Spitfires and Hurricanes screamed into the skies to beat off the Messerschmitts, Heinkels, and Junkers. The heavens above the whole stretch, from Hull and the Humber to Bristol and the Severn, were a scene of battle.

Coventry a Nazi Victim

Peaceful Coventry, previously distinguished chiefly for the adventure of Lady Godiva (page 451), suddenly became an object of Nazi terrorism on the night of November 14, 1940, when some 400 German bombers reduced it to rubble.

Widely separated place names on the new map recall scenes of heroic service by 2,000,000 volunteers who worked for 2,000 days and blacked-out nights fighting fires, rescuing wounded, and defusing unexploded bombs.

Thousands of Americans, looking at the new map, will recognize familiar names and recall pleasant associations. Two million Yanks trained at 77 separate bases in Britain between 1942 and 1945. GI Joes entertained in British homes, formed lasting friendships. Some brought British wives back to the United States.

In compiling the new map, your Society's cartographers paid particular attention to all places which would strike a responsive chord with former members of the American Expeditionary Forces. Lists supplied by the United States Army and United States Air Force were consulted.

Some veterans, however, may have to think twice before they identify their former stopping places in Britain. Many a member of Eighth Air Force headquarters, for example, became so accustomed to referring to his base at Tedlington by the code name of "Widewing" that the actual place name may sound strange. Eighth Bomber Command personnel invariably referred to High Wycombe, their headquarters, as "Pinetree." To Eighth Fighter Command members, "Ajax" was better known than Watford.

Every port in Britain worthy of that name is linked closely with June 6, 1944 (D-Day). On the new map the English Channel is represented by a strip of placid blue. But on D-Day 4,000 landing craft and 800 warships emerged from British ports and churned the Channel waters to carry Britons and Americans over to the soil of France.

Above the Channel that day 11,000 United Nations aircraft roared. Glider trains, some 50 miles long, bore paratroopers to their objectives over Normandy and Brittany.

Invasion Coast Names Familiar

The French invasion coast is mapped in detail, revealing names of towns splashed in headlines on the first pages of the world's newspapers in 1944. Thousands of Americans and British have vivid memories of Caen, Carentan, Bayeux, Cherbourg, Montebourg, Saint Lô, Arromanches, and Coutances.

Today farmers of Normandy and Brittany again till their hedgerow-framed fields and children play around rust-eaten invasion materiel on Omaha and Utah beachheads.

Dunkirk recalls those earlier days in May-June, 1940, when some 900 boats of every description, putting out from British ports, converged under an RAF "umbrella" to evacuate some 335,000 British troops stranded on the beaches.

The new map portrays the British Isles on the generous scale of 28.2 miles to one inch. It is primarily a travelers' map, but the student of literature or history will find it a clear and beautiful reference work on Great Britain and Ireland.

Ireland (not Eire) is shown as an independent republic, following its recent withdrawal from the British Commonwealth. The Gaelic *Eire* no longer is used as the official name of the country.

Distinctive symbols, listed and explained in the map legend, point out places of particular interest. Large crosses designate cathedrals; smaller crosses, notable churches in towns. Open squares identify, among other histori-

* Members may obtain additional copies of the new Map of the British Isles (and of all standard maps published by The Society) by writing to the National Geographic Society, Washington 6, D. C. Prices in United States and Possessions, 50¢ each on paper; $1 on linen; Index, 25¢. Outside United States and Possessions, 75¢ on paper, $1.25 on linen; Index, 50¢. [illegible] page.

buildings, those structures in open country which are preserved under the National Trust.

Frames of dots mark ruins or archeological sites, while crossed swords with dates show historic battlefields.

The map is elaborately decorated in the manner of British 16th- and 17th-century cartographers. The design is by NATIONAL GEOGRAPHIC staff cartographer C. E. Roldsford.

In the four corners of the border, baroque cartouches bear the coats of arms of England, Scotland, Ireland, and Wales. Each is associated with its national flower: the rose for England, the thistle for Scotland, the leek for Wales, and the shamrock for Ireland.

Smaller cartouches, set in the border frame the coats of arms of five major cities: London, Edinburgh, Dublin, Belfast, and C[illegible]

Portraits Embellish Border

Forty-four drawings, alternately depicting scenes from the islands and portraits, make up the rest of the wide border.

Portraits include those of English men and women eminent in the fields of literature, history, and science: Chaucer, author of the *Canterbury Tales*; Shakespeare, the immortal bard of Avon; Elizabeth, the Virgin Queen; Victoria, great-great-great-grandmother of Charles Philip Arthur George, Britain's new baby prince; Newton, the celebrated mathematician and philosopher; and Darwin, the distinguished naturalist.

Scenes range from Canterbury Cathedral and Westminster Abbey to shipbuilding on the Clyde and golfing at St. Andrews.

The large cartouche framing the title and legend for the map bears the royal coat of arms and portraits of George VI and his queen, Elizabeth. The map scale also has a decorative frame.

The old-style designs embellish a map up-to-the-minute in geographical information.

The new shore line of The Wash between Wainfleet All Saints and King's Lynn includes 3,000 acres of rich Lincolnshire land which have been reclaimed from the sea. Two huge sea walls, each six miles long, brought about this addition to English soil.

As a help to travelers, the highways are [illegible] for motoring. Major railways are shown in black; rivers, streams, and other drainage features in conventional blue.

Striking decoration and wealth of historical reference material make the map, 26½ by 32½ inches in size, particularly desirable for wall display in homes, schools, or offices.

For countless Americans who never have been in Great Britain or Ireland, hundreds of place names will be familiar. Some of these names simply have been transplanted to America: Boston, Plymouth, Dartmouth, Princeton (Princetown), Portland, Swarthmore (Swarthmoor), or Chesterfield. Others are familiar in song: Penzance, from Gilbert and Sullivan's *Pirates of Penzance*; Tipperary, from the famous song of World War I; Loch Lomond from the old Scottish ballad.

Nursery Rhyme Place Names

To New Yorkers, Gotham may suggest Manhattan. But to most Americans it will be associated with a nursery rhyme, as in the case of *Banbury Cross* and *Saint Ives*.

Place names familiar in poetry are legion. To mention only a few.

Inchcape, in Robert Southey's *The Inchcape Rock*:

> A sound as of with the Inchcape Bell
> The Devil below was ringing his knell

Berkshire moors, in Matthew Arnold's *The Scholar Gypsy*:

> As some lone alehouse in the Berkshire moors

The Thames, in Edmund Spenser's *Prothalamion*:

> Sweete Themmes! runne softly, till I end my song

Aghadoe, in John Todhunter's Irish ballad of the same name:

> There's a glade in Aghadoe, Aghadoe.
> [illegible]
> There's a green and silent glade in Aghadoe

Then there are William Wordsworth's *Evening on Calais Beach*; Robert Burns's *Ye flowery banks o' bonnie Doon*, and George Fox's *The County of Mayo*.

William Butler Yeats, one of Ireland's most famous poets, who died in France in 1949 at the age of 73, had written his burial instructions not long before, in a poem which began:

> Under bare Ben Bulben's head
> In Drumcliff churchyard Yeats is laid

The war prevented friends from carrying out his wishes until a few months ago, when his body was brought back to County Sligo and laid to rest in Drumcliff churchyard.

To Americans other place names have a humorous touch: Saltburn by the Sea, Much Wenlock, Spittal of Glenshee, Ballybunion, Mundles, Bunny, and Giggleswick.

The many Welsh double l's seem curious and reach an all-time high with Llanfairpwll, which is short for Llanfairpwllgwyngyllgogerychwyrndrobwllllantysiliogogogoch [illegible]

The name is said to mean "Church of St. Mary in a hollow of white hazel, near to a rapid whirlpool and to St. Tysilio's Church, near to a red cave".

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To carry out the purposes for which it was formed [illegible]

The Magazine [illegible] increase [illegible]

Articles and photographs are desired. For instance, The Magazine [illegible]

[illegible] the editorial and photographic staffs [illegible] The Society has [illegible] more than [illegible] expeditions, some of which required years of field work to achieve their objectives.

The Society's notable expeditions have resulted in the [illegible] of the southwestern United States [illegible] discovered the Atlantis. In claiming the prize of the year [illegible] expedition to that region. The Society's [illegible] discovered secrets that had puzzled [illegible]

In Mexico, The Society's [illegible] the Smithsonian Institution [illegible] January [illegible] discovered [illegible] to the Americas, in which we have [illegible] Mayan characters [illegible] Nat[illegible] Spaniards [illegible] antedating by 300 years any [illegible] America and revealed a great deal of early [illegible] culture, previously unknown.

On November 11, 1937, [illegible] the National Geographic Society and the U. S. Army Air Corps, the world's [illegible] Francis E. Lowery II, [illegible] reached [illegible] the world's [illegible] record of 24,815 feet. Capt. Albert W. Stevens [illegible] U. S. Army Air Corps, [illegible] the goal [illegible] with a [illegible] of [illegible] and obtained results of astronomical value.

The National Geographic Society-U. S. Army Air Forces Expedition from a camp in southern Brazil photographed and observed the solar eclipse of 1937. This was the seventh expedition of The Society to observe a total eclipse of the sun.

The Society cooperated with Dr. William Beebe in deep sea [illegible] off Bermuda, during which a world record depth of 3,028 feet was attained.

The Society granted $25,000 and an additional $75,000 was given by 1,[illegible] members, in the lower house of a [illegible] congressional appropriation for the purchase [illegible] Shenandoah National Park. [illegible] in the Shenandoah [illegible]

One of the world's largest [illegible]

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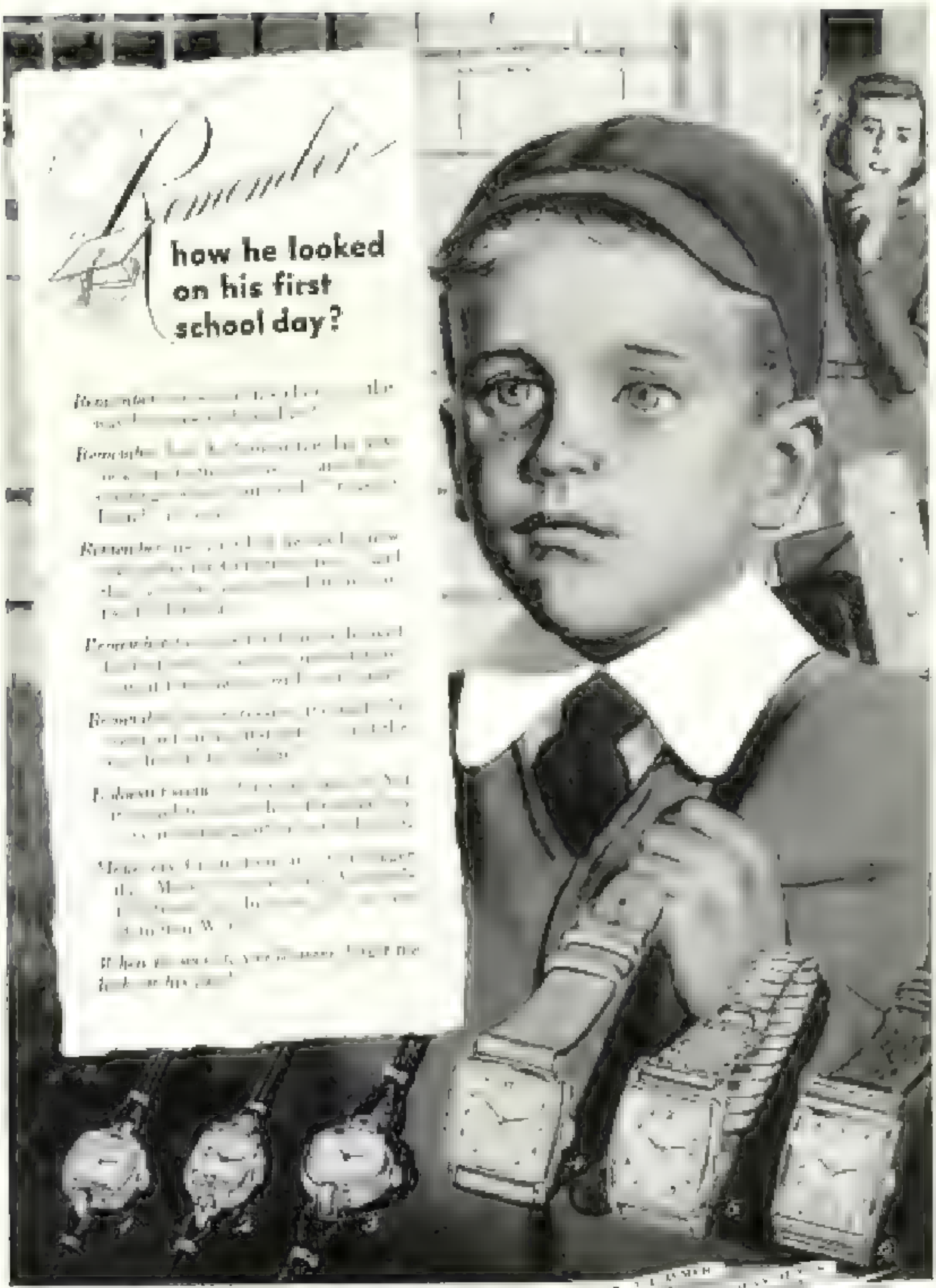

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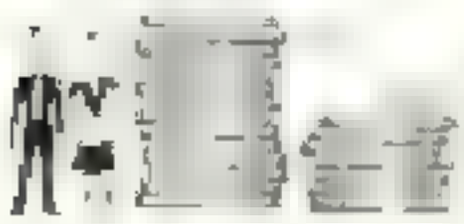
"O[illegible] over the dinner table, a few months [illegible] Alice and I were [illegible] the cost of [illegible]

Our budget showed that no [illegible] than half of [illegible] was being spent for food.



"We [illegible] about our [illegible] the [illegible] people we were [illegible]

"Then, one Saturday [illegible] Somehow, we [illegible] the subject of food, and our friends led us to their kitchen to see their General Electric Home Freezer.

[illegible]

Bob told me that he saves plenty on every [illegible] he does [illegible] meat. They also [illegible]

[illegible] — and have it cut [illegible] shops and [illegible]

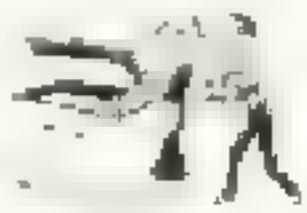
"Then [illegible] the [illegible] food and showed me how [illegible] on [illegible] has [illegible] food [illegible]

"And [illegible] a [illegible] order. Now, in a couple of hours they can put up as much food in their freezer as they could by canning over a hot stove *all* day!

"Boy, what food"

"Later, we sat down to a 7-course dinner fit for a king and queen. Our hostess prepared it in less than an hour — and all of it came out of their home freezer. It was the finest food we ever tasted — but more

That's [illegible] us! We, too, decided that we could not afford to be without a G.E. Home Freezer. And we're glad we did. [illegible] we're [illegible] our food bill [illegible] we're enjoying the most [illegible] food we've ever tasted."



Here's why [illegible]

[illegible] General Electric Home Freezer [illegible]

[illegible]

See this remarkable and dependable home [illegible] General Electric [illegible] today. Then [illegible]

HOME FREEZERS

For quick freezing foods at home ..
For storing the frozen foods you buy

GENERAL ELECTRIC

A great new train—THE CALIFORNIA ZEPHYR

Three railroads—the Burlington, the Denver & Rio Grande Western, and the Western Pacific—are pooling on a regular basis March 30th on a streamlined transcontinental train built by Budd, to provide a new daily service between Chicago and San Francisco over a scenic route of incomparable grandeur.

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The California Zephyrs traverse some of the finest scenery in the world, and their schedules, in both directions, permit you to enjoy the most exciting portions during daylight hours . . . the serried peaks of the highest Colorado Rockies . . . Essex and Glenwood Canyons . . . snowy Sierras . . . and California's fabulous Feather River Canyon of gold rush fame.

Another incentive to travel on these wonderful trains is the fact that they are constructed not merely of stainless steel, the strongest material used in building railway cars. Beneath their gleaming surface these cars have structures of the same lustrous metal, three times as strong as ordinary steel. In the United States, the only all-stainless steel cars are built by Budd . . . and Budd builds no other kind. The Budd Company, Philadelphia 32, Pa.

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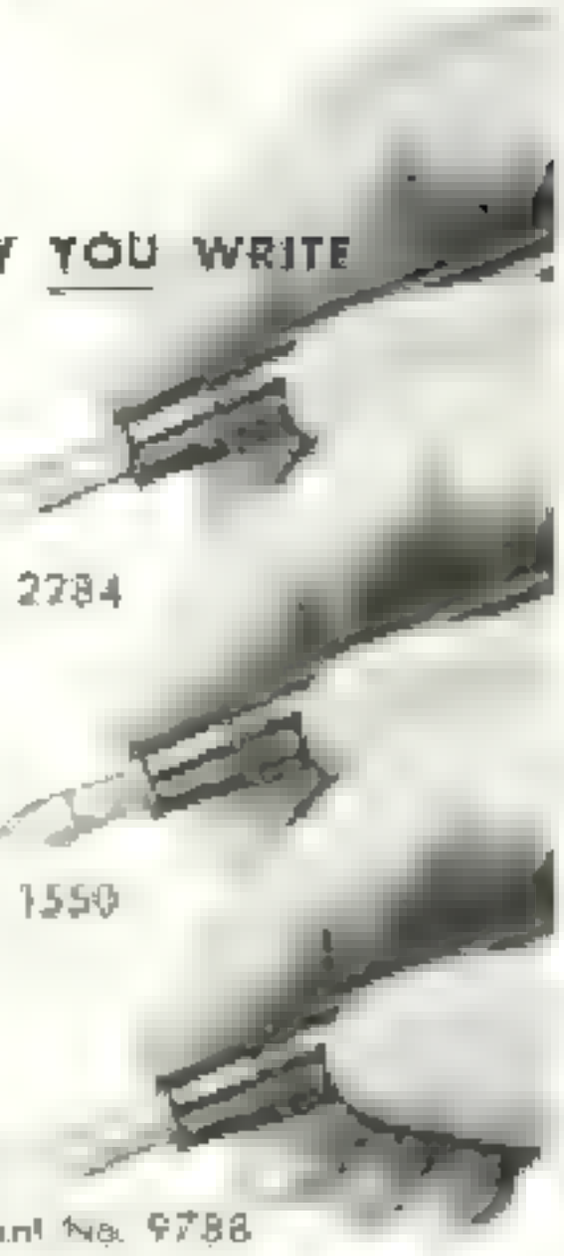
THE FOUNTAIN PEN WITH THE RIGHT POINT FOR THE WAY YOU WRITE



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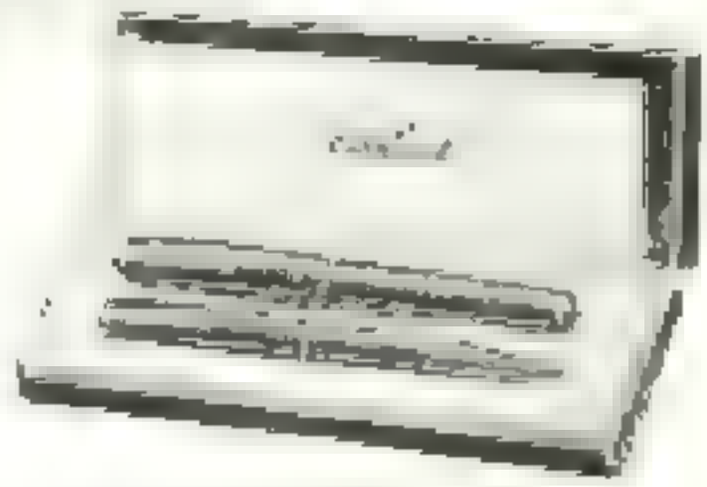

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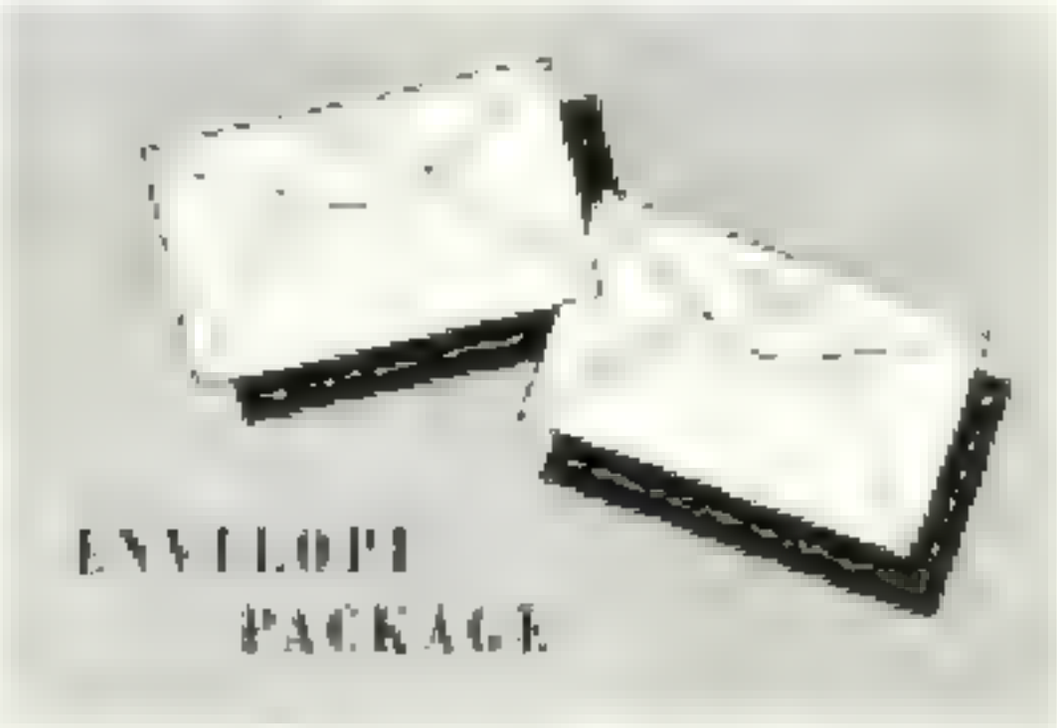

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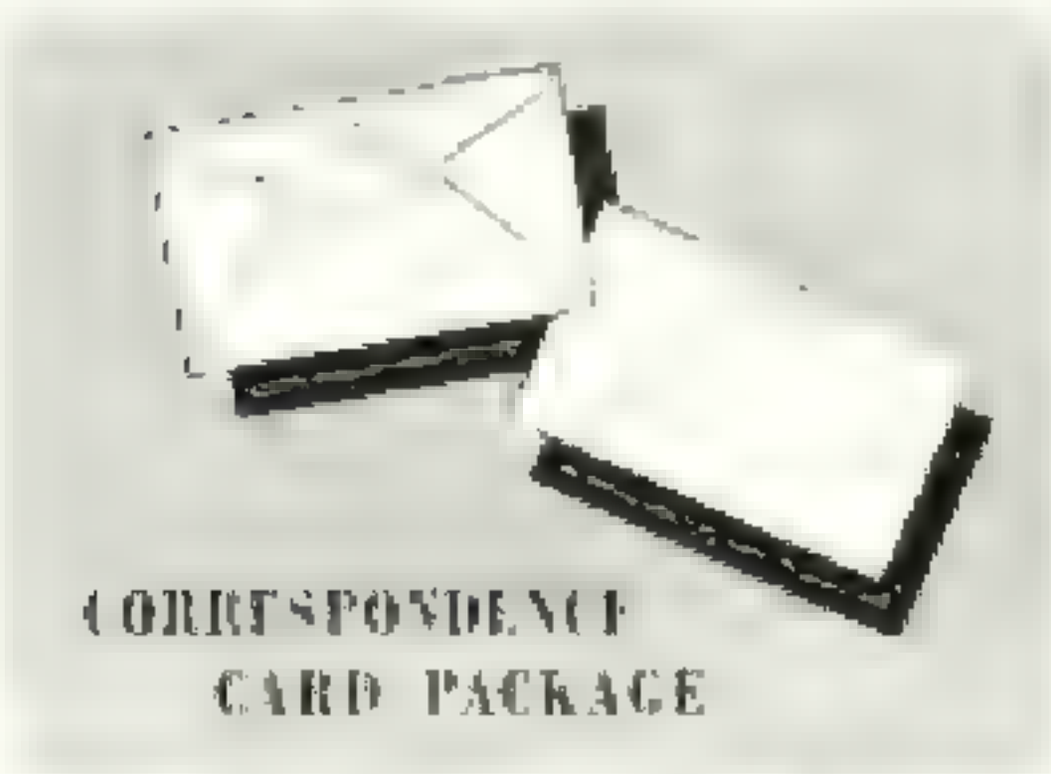

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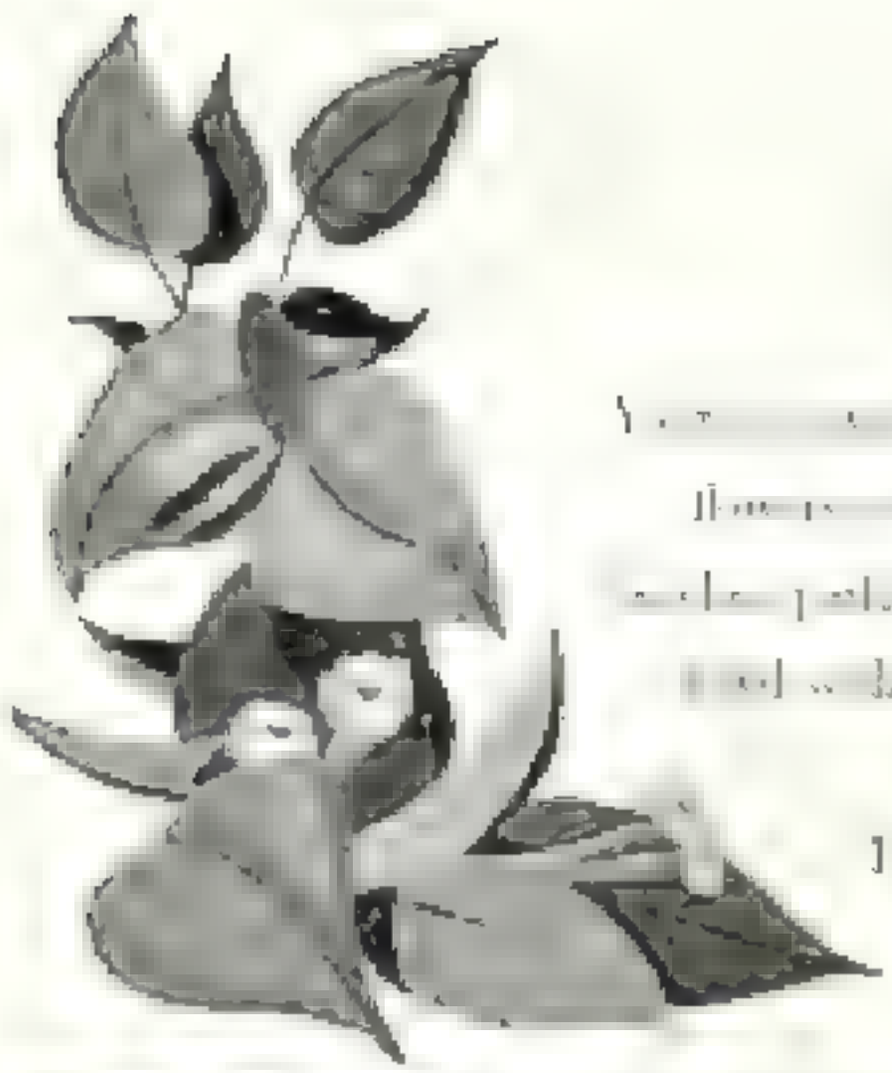
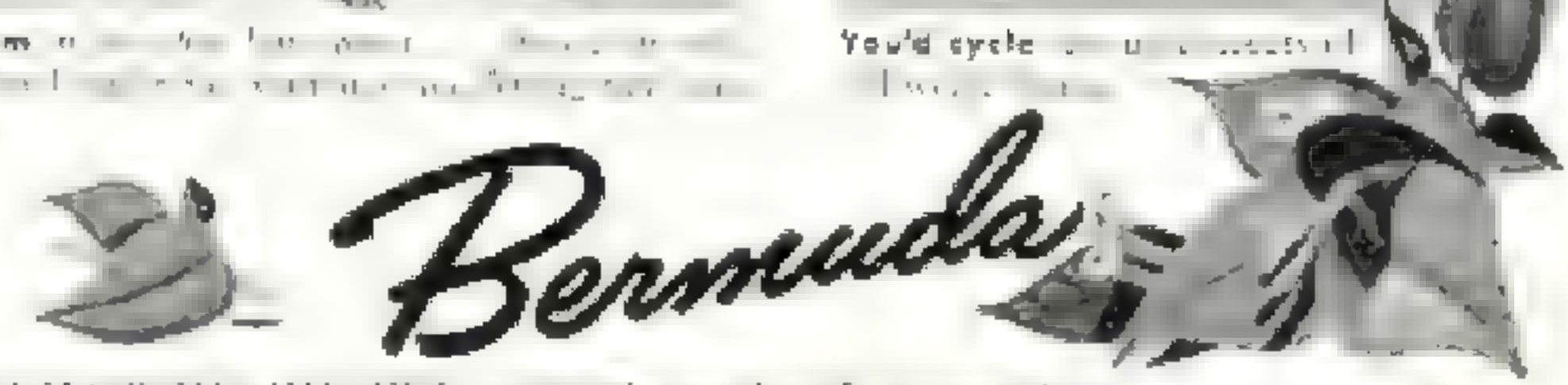


If Time Stood Still...

You'd have sunny hours

You'd swim

You'd cycle



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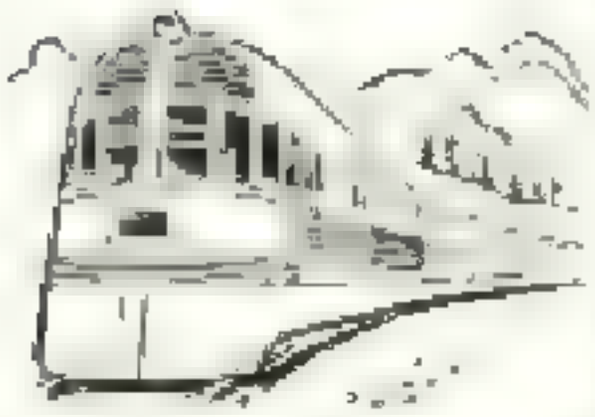

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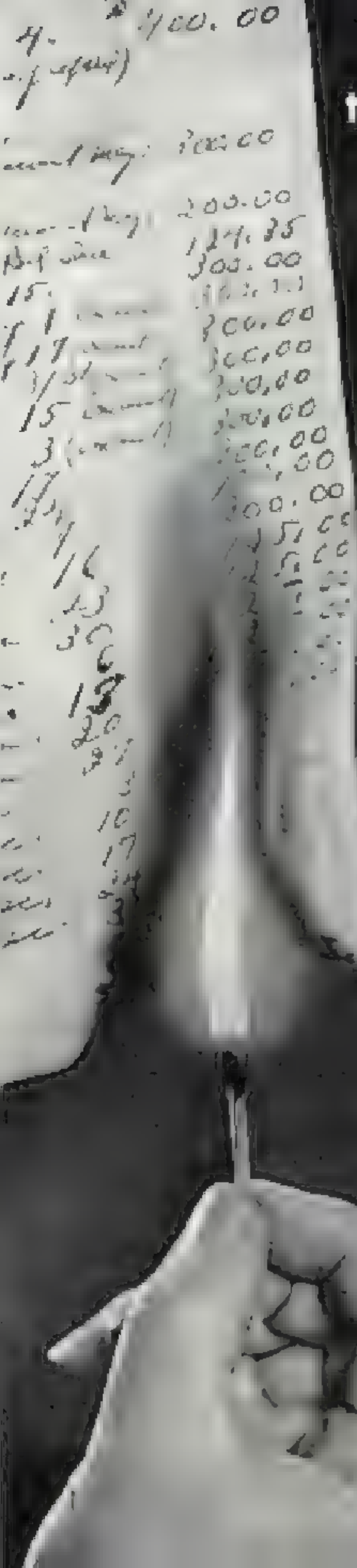

think your company is fireproof?

MAKE THIS SIMPLE TEST AND SEE!

Touch a flame to one of your ledger sheets or letterheads. Will it burn?

That's a little flame. Now suppose your entire offices were on fire—would these same records burn?

Naturally, if they are unprotected. Metal filing cases won't protect them for more than a minute or so. *And they may not be protected even in your safe!*

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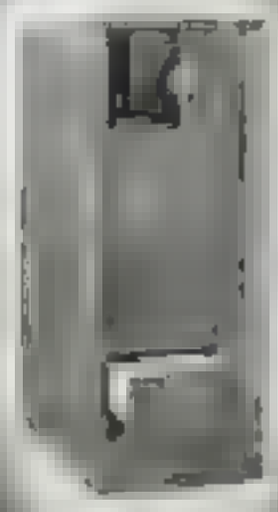

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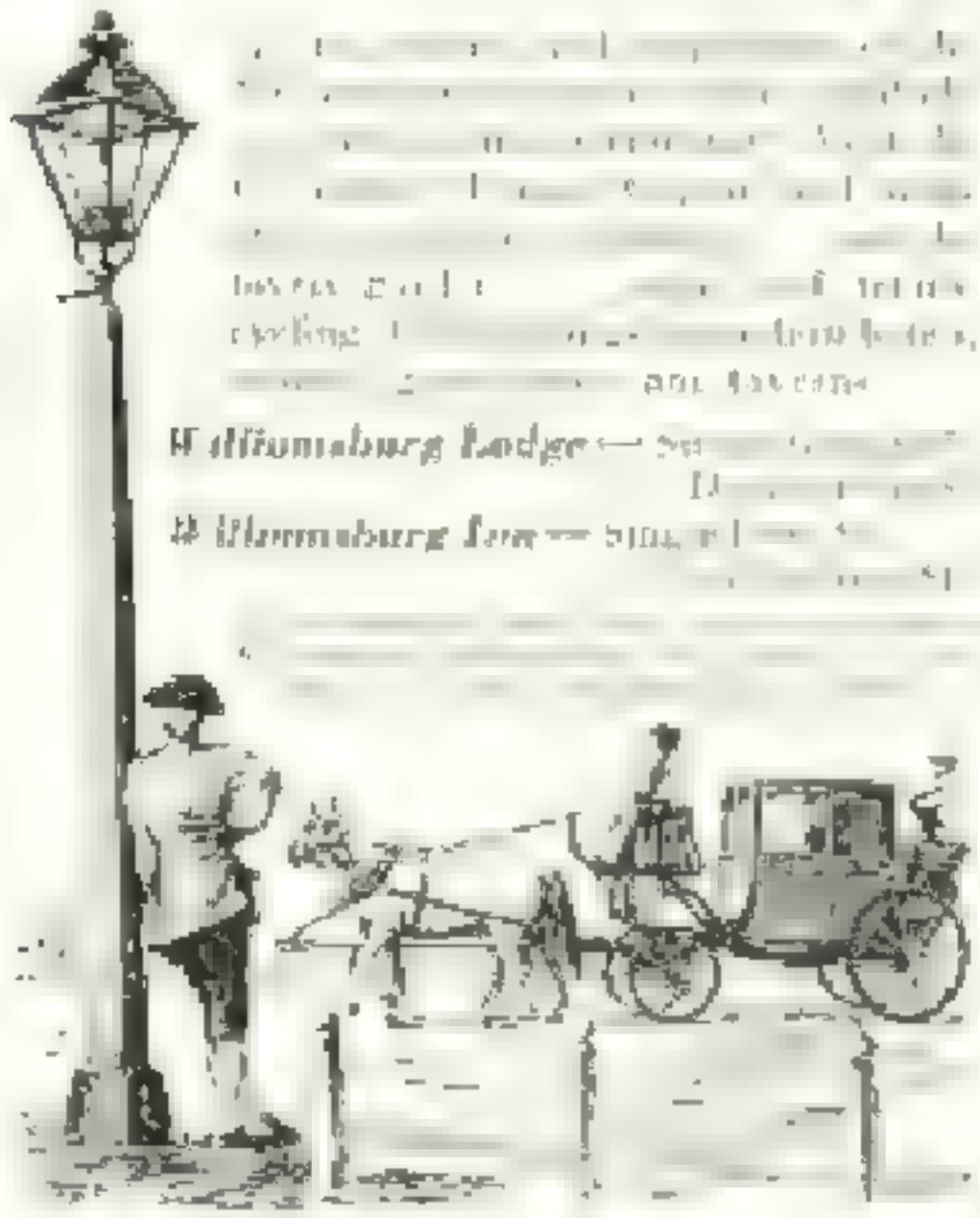

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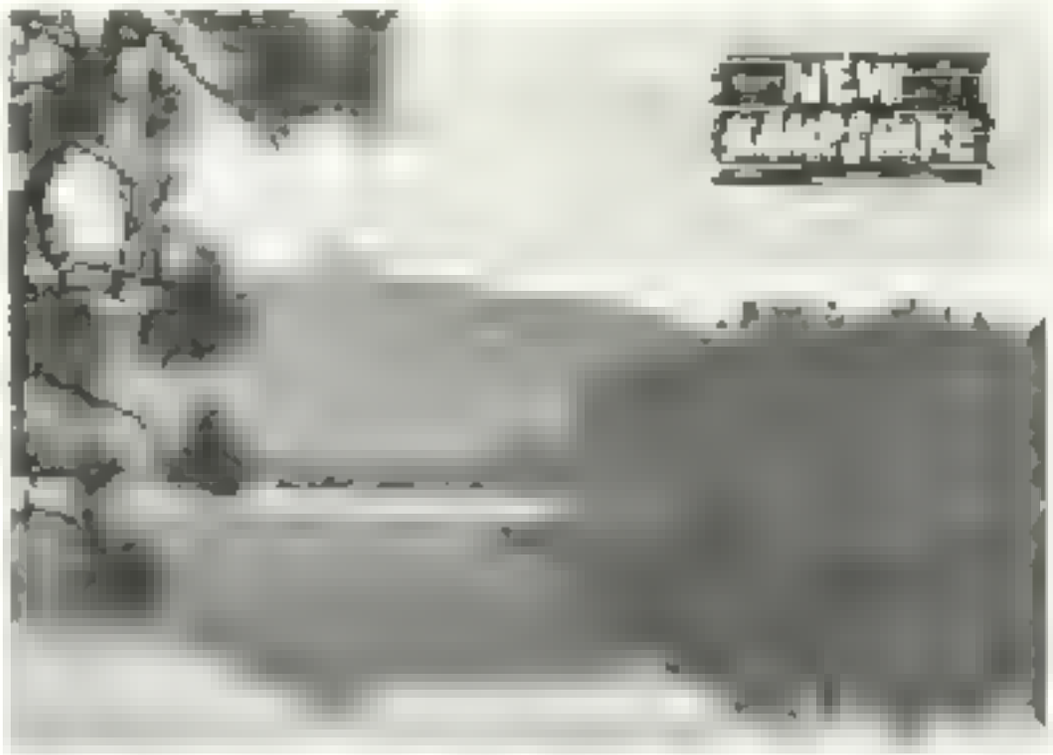

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[illegible] possible [illegible] and [illegible] than [illegible] Not [illegible] pictures [illegible] and difficult to watch.

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One knob, one twist—there's your station! [illegible] Zenith [illegible] Not [illegible] adjustment!

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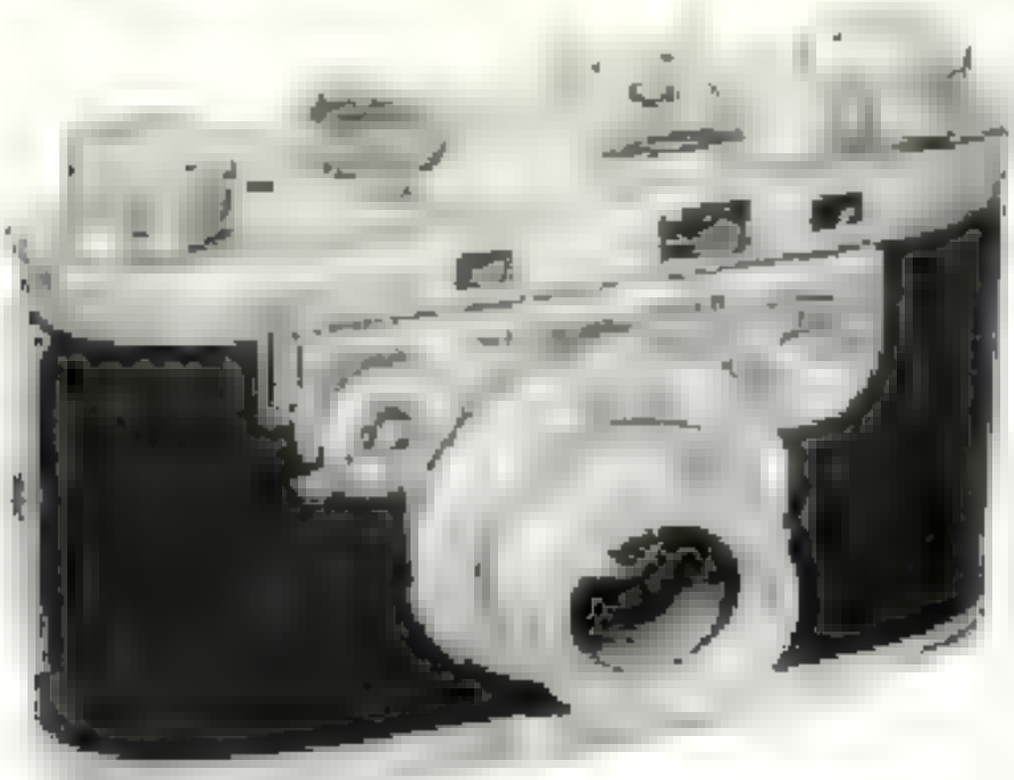

FOTON

[illegible]

[illegible]

1. Stops as stars

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Guaranteed for life. [illegible]

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in a jiffy — with this

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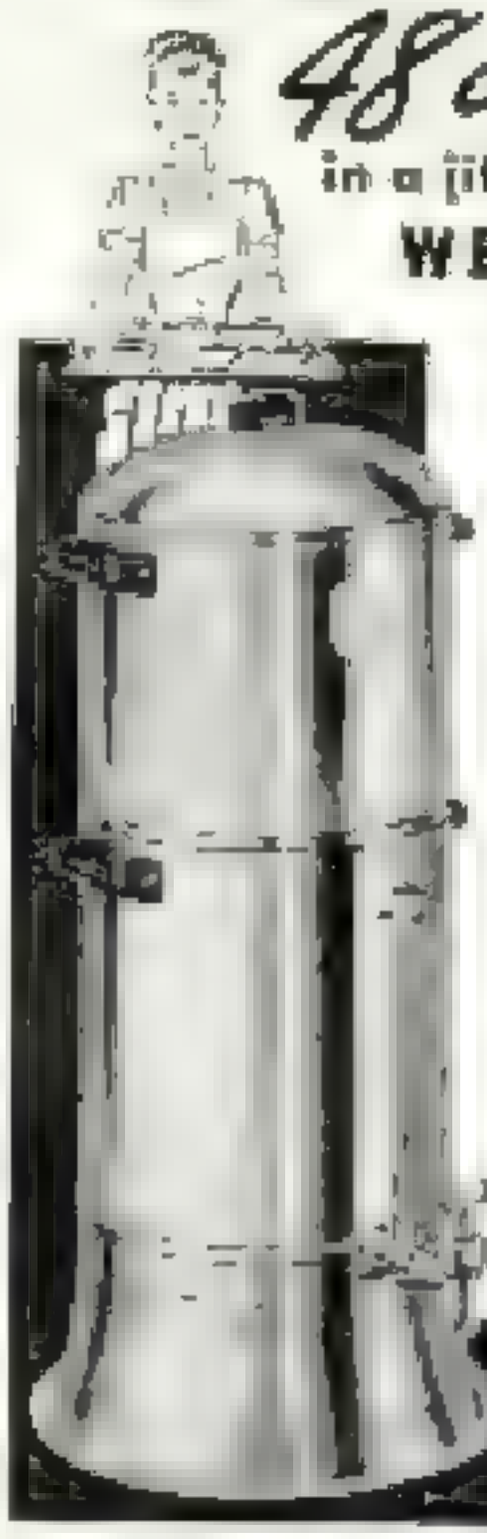

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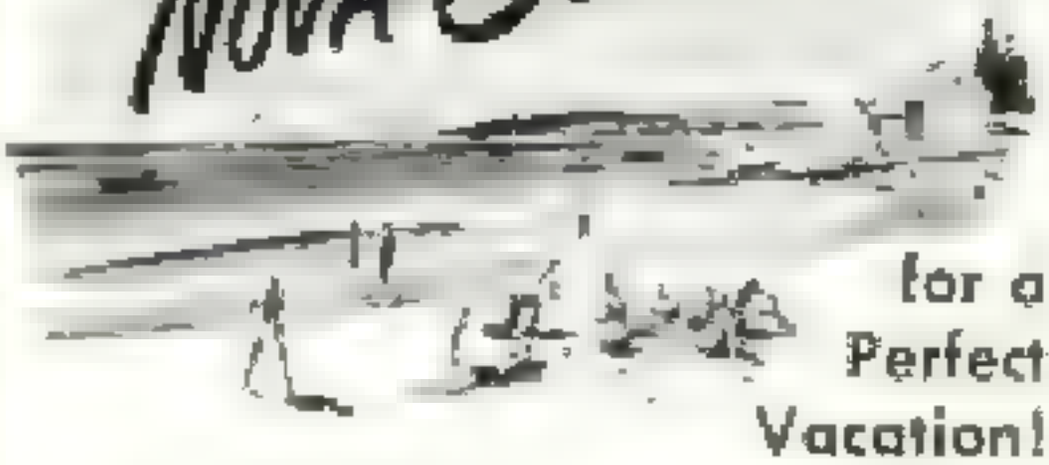

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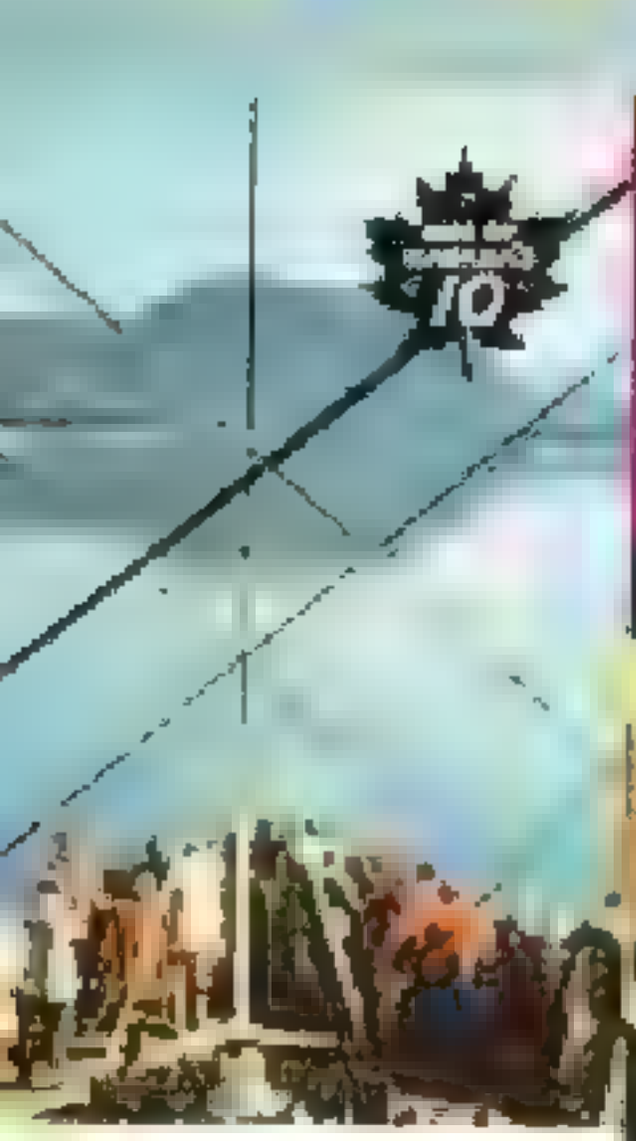

MALIGNE LAKE [illegible]

"You'll fall in love with JASPER!"

(IN THE CANADIAN ROCKIES)

You're vacationing because the minute you [illegible] — [illegible] traveling to Scenic Rocky Mountaineer [illegible] where West [illegible] Canadian National [illegible] Canadian National [illegible] "We'll tell you *where* and *take* you there."

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* [illegible]


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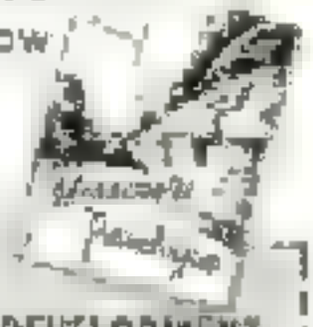

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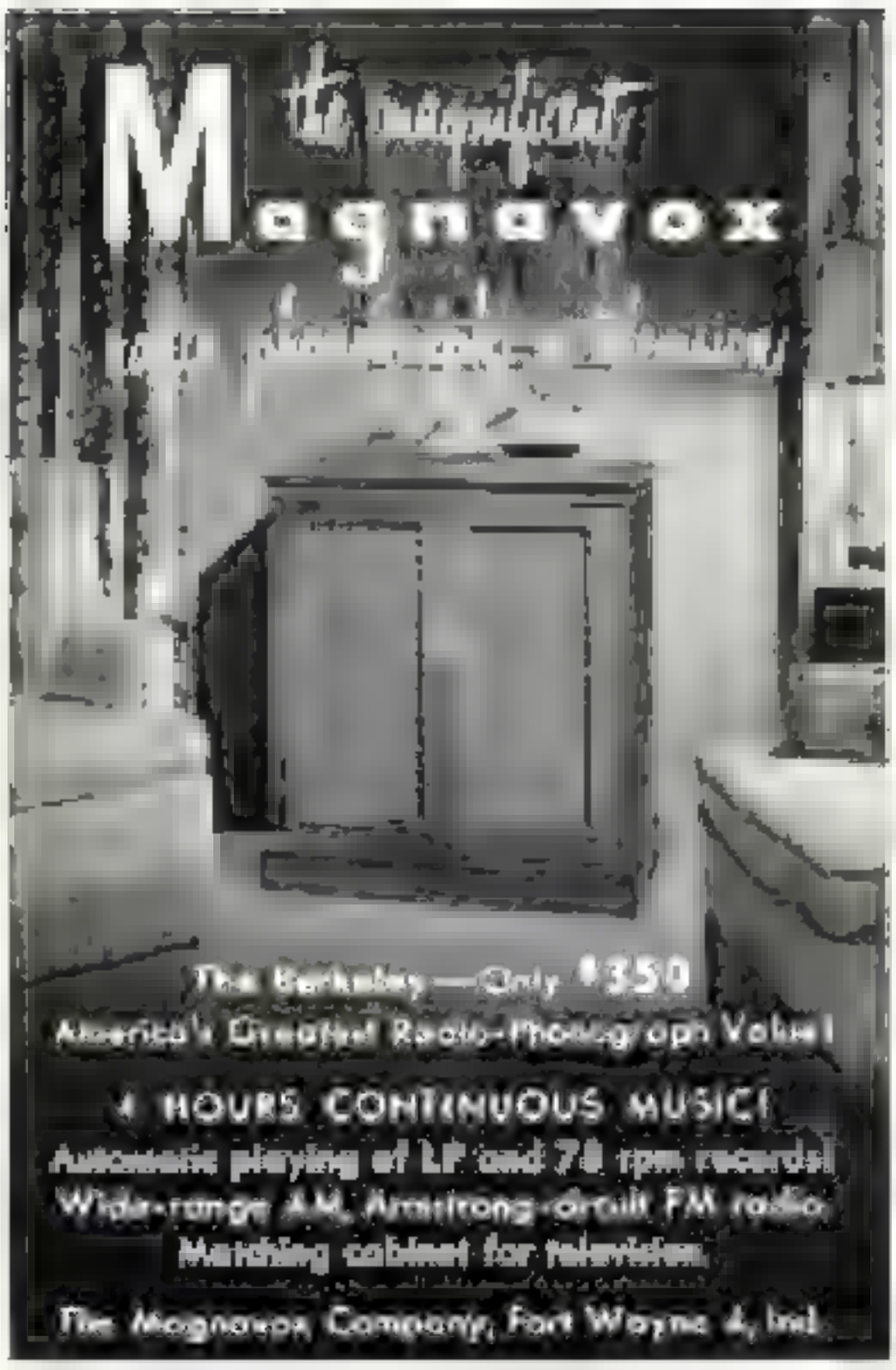
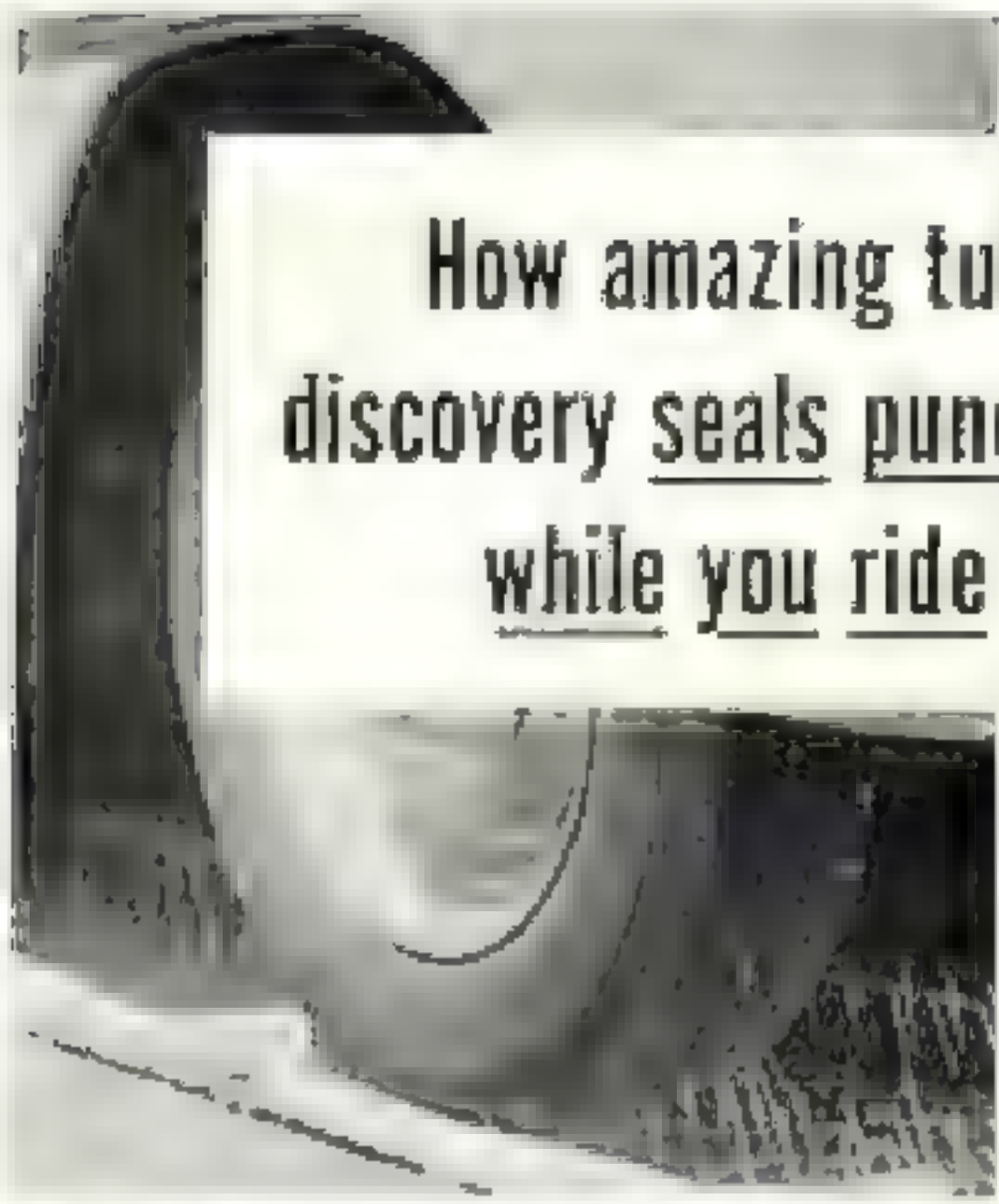


How amazing tube discovery seals punctures while you ride!



1. [illegible]—*hundreds of them*—pierce deep [illegible] Tire or Tube? What happens? [illegible] tire does not go flat [illegible] car keeps right on rolling!

2. For good measure, more nails are pounded into the tire and through the [illegible] Bulkheads prevent [illegible]

3. Here's [illegible] what [illegible] Seiberling Sealed-Air Tubes with patented bulkheads [illegible] or a tire starts [illegible], the tube seals itself *permanently!* No further repairs necessary!

How can this tube outlast four tires *WITHOUT GOING FLAT?*

How can this amazing Seiberling Sealed-Air Tube—the tube *no one* can imitate—actually outlast four tires, run as high as 300,000 miles—without even *one* flat? How can it save you many times its purchase price by eliminating the expense of tube repair bills and ruined tubes and tires? How can it make your driving immeasurably safer by protecting you from the dangers of sudden flats and blow-outs, and from the hazards of roadside tire changes? If you drive a car or truck it will pay you many times over to find out. Read the coupon below for the amazing story of what the Seiberling Sealed-Air Tube can do for you.

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[illegible] projectors fading [illegible] for commercial [illegible]

[illegible] own a Victor — [illegible] greatest [illegible] entertainment

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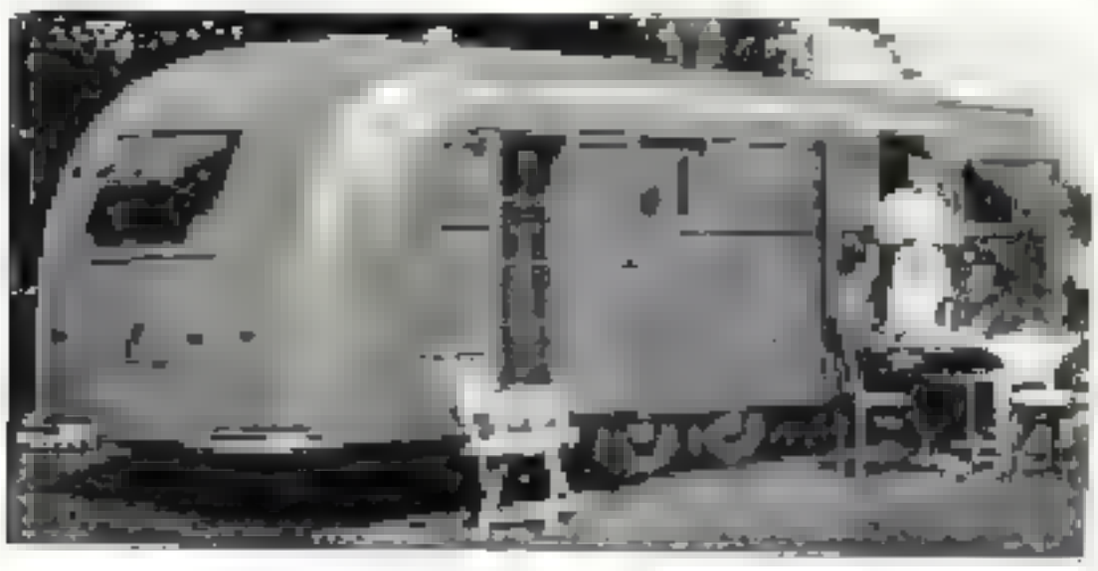
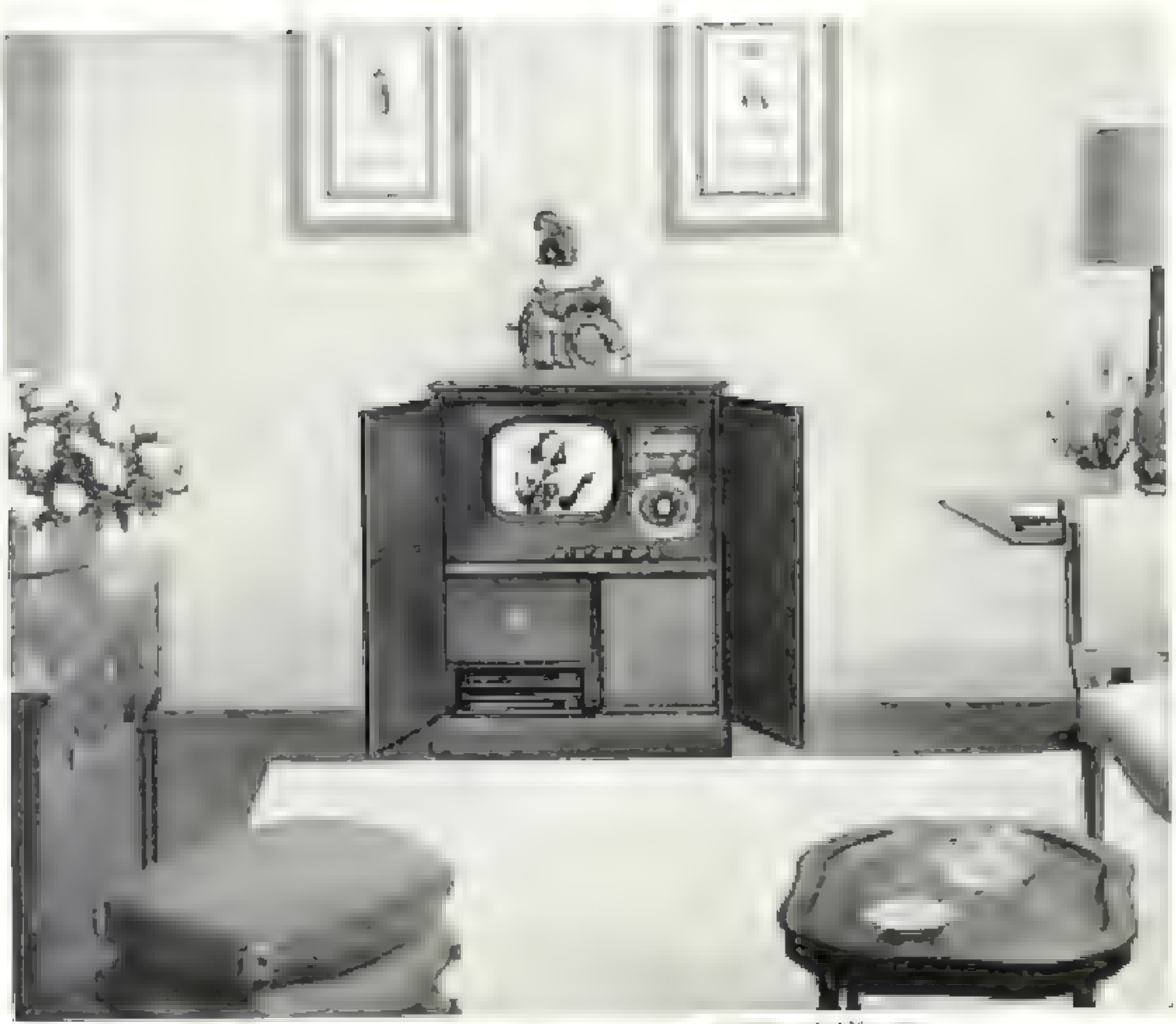


[illegible]

VAGABOND COACH MFG. CO
Box 484 • New Hudson, Mich.

WRITE [illegible] today



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There is one name

in every field that

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[illegible]

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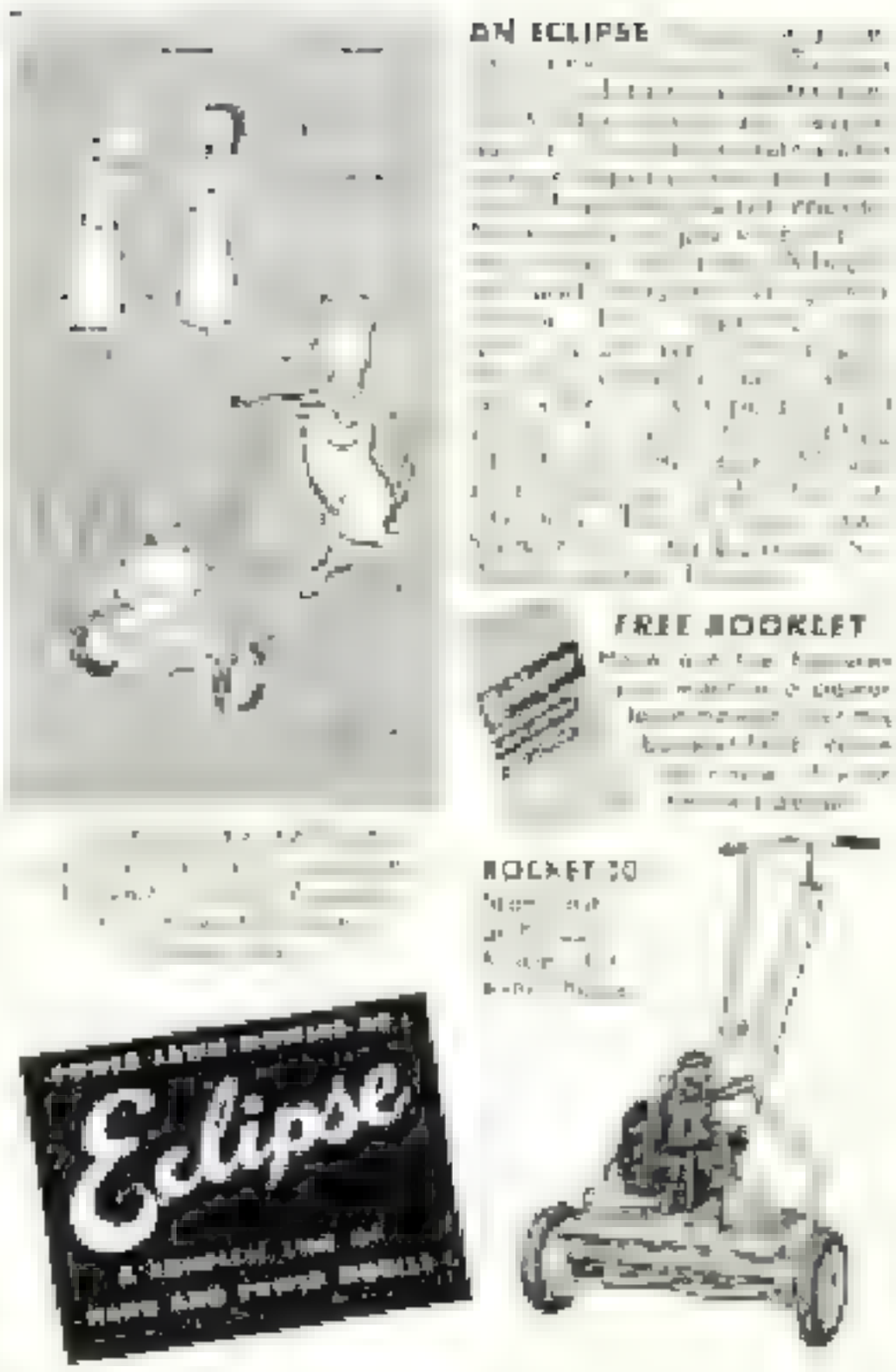

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mississippi

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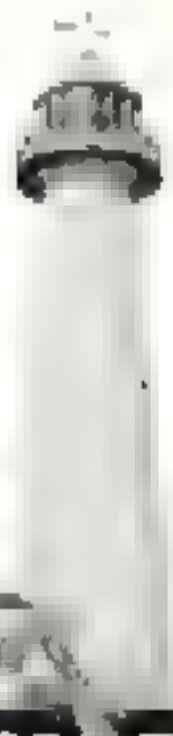

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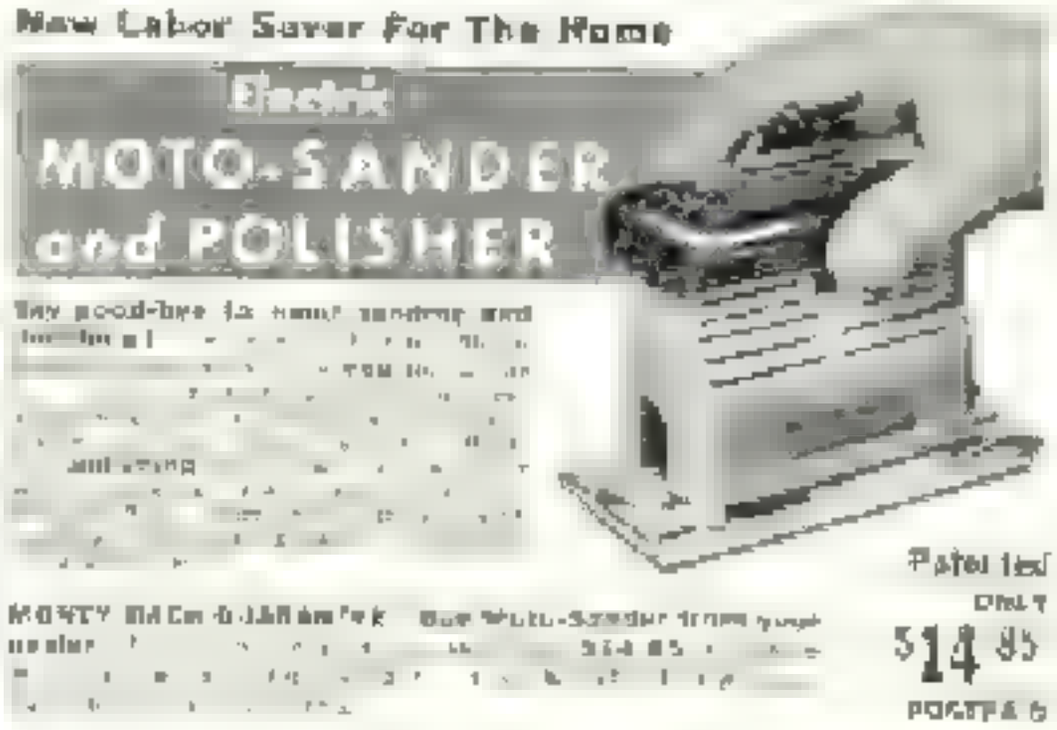

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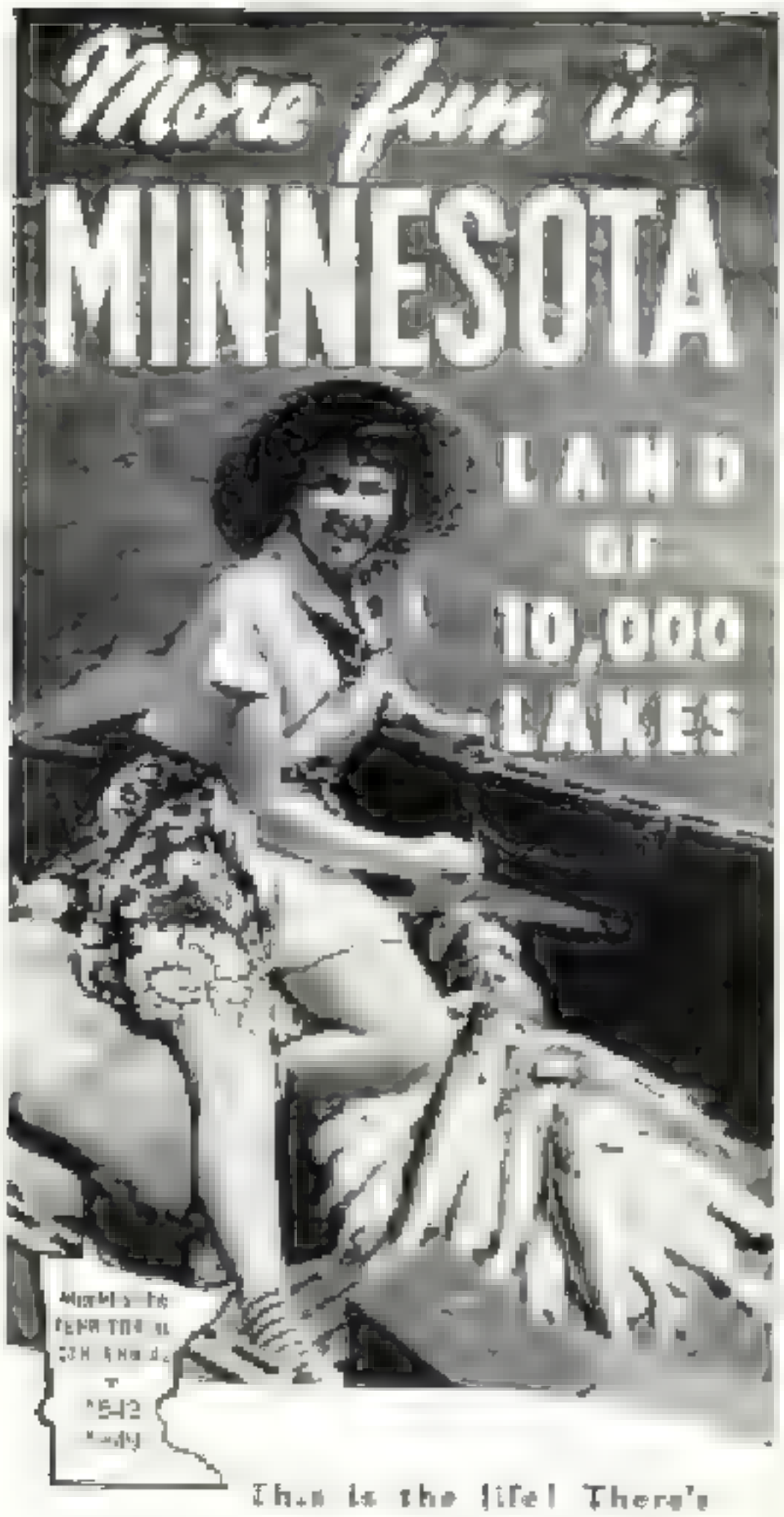
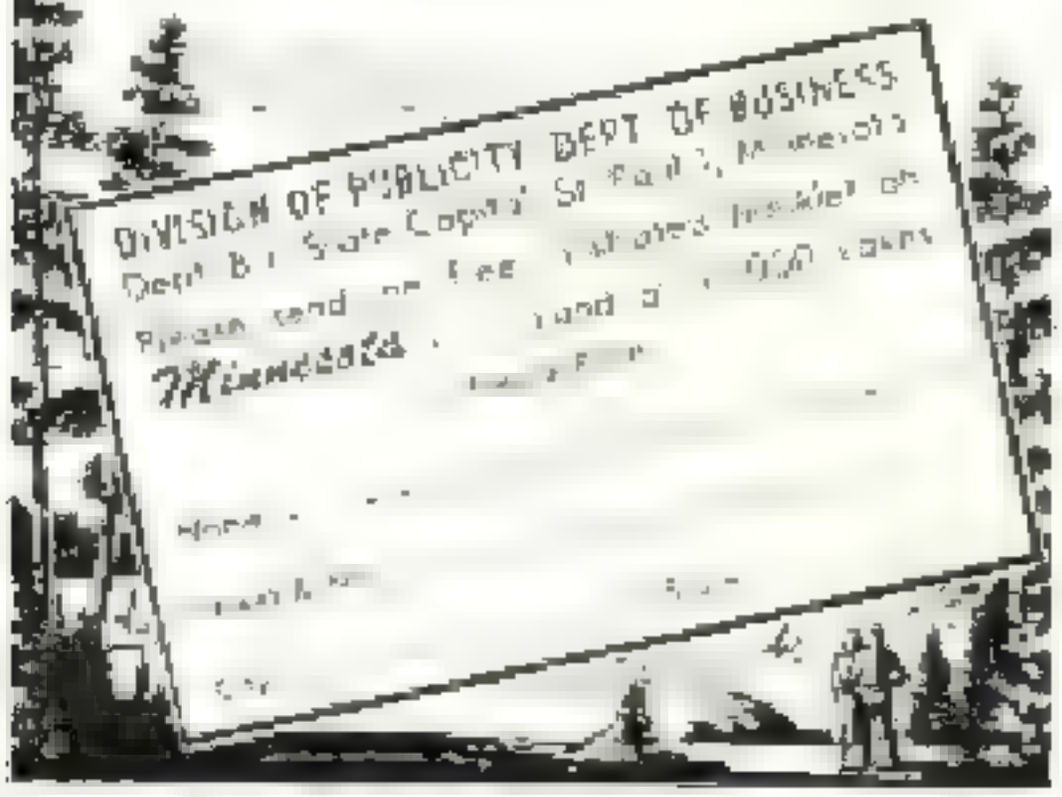


This is the life! There's nothing I enjoy more than coming to Minnesota to try my luck hooking the big ones! This Land of Sky Blue Waters is indeed a vacationer's state with its swimming, golfing, tennis, hiking, boating and horseback riding. I choose it year after year for my summer vacation, for I always have MORE fun in Minnesota.



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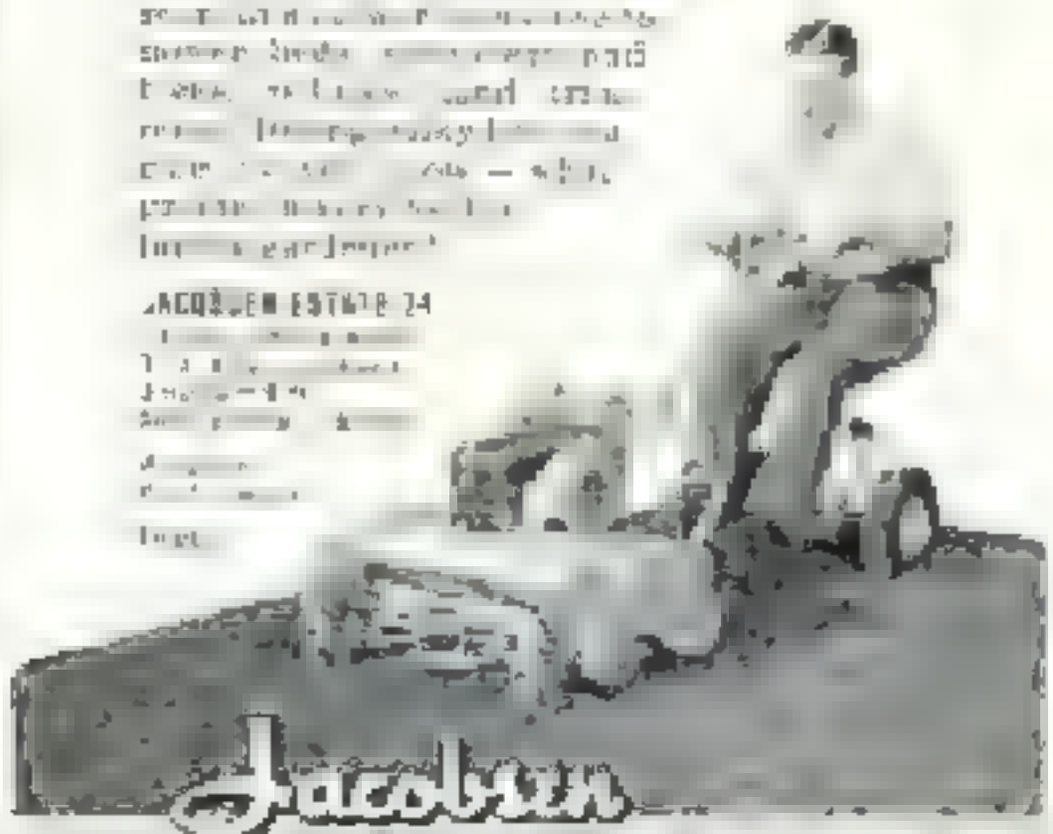

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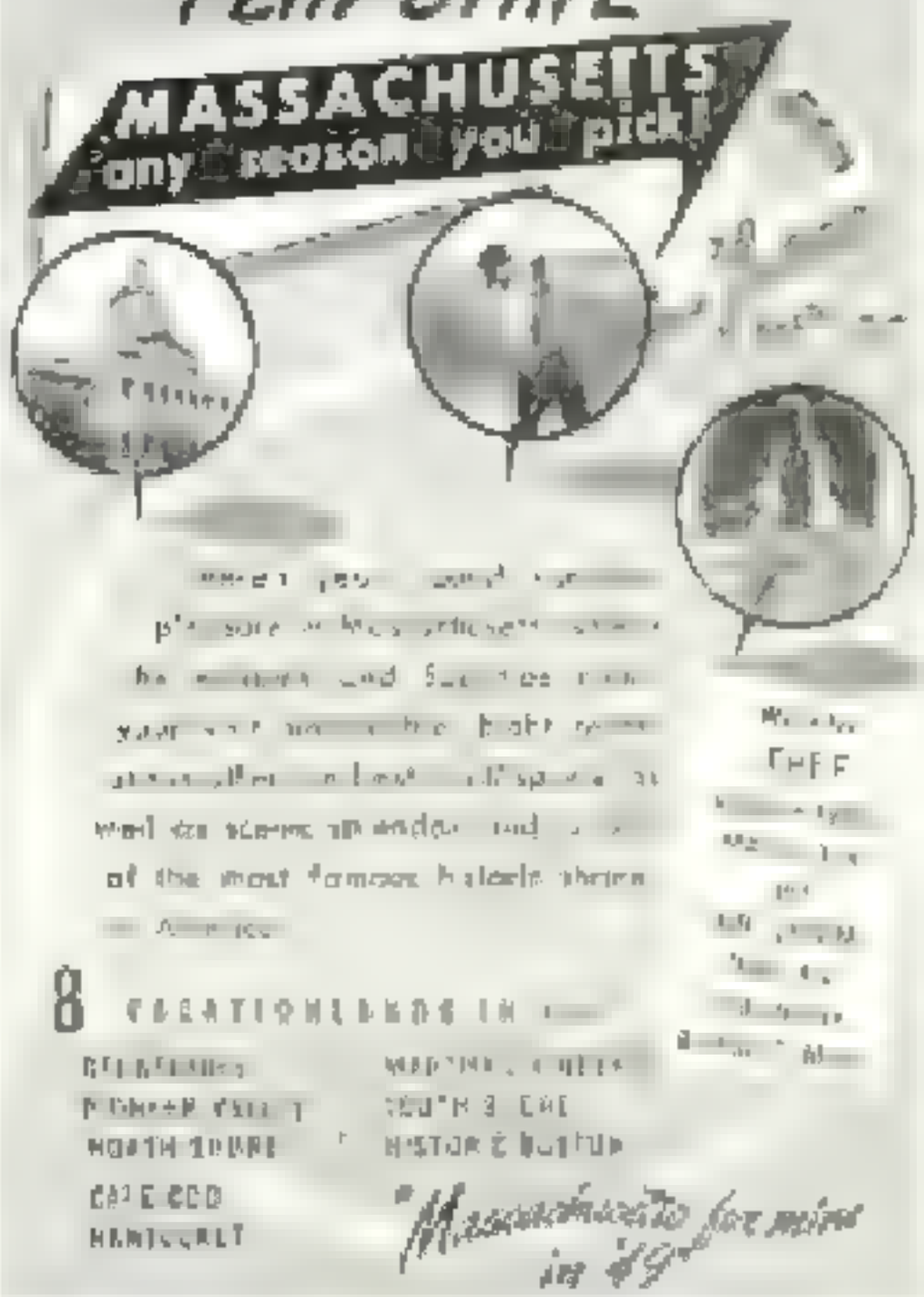

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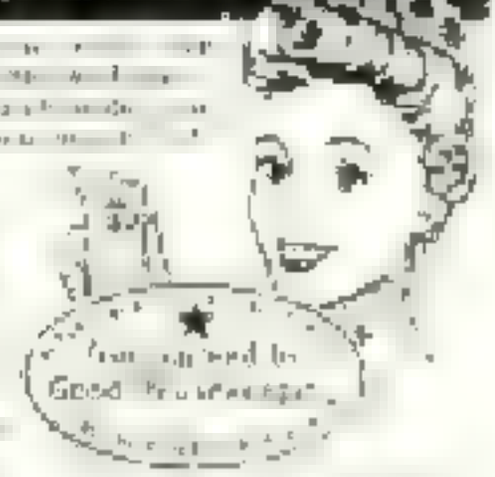

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What YOU Can Do About Cancer

Great strides have been made in diagnosing and treating cancer. While it is still the second leading cause of death in the United States, the mortality rates from some forms are declining.

Medical science is constantly at work increasing its knowledge of the disease. Better techniques for diagnosing cancer exist today than ever before. For example, recent development has raised the percentage of correct early diagnosis of one type of cancer from 46 to [illegible] per cent.

Advances in surgery and [illegible] have proved valuable in relieving pain and prolonging life. Improved methods of treating the disease have cured in some instances, cases that formerly were considered hopeless.

Present knowledge is not fully utilized, however, as more people learn the warnings of the disease and come for examination while it is [illegible]. Cancer must be discovered early and treatment promptly started to get the full benefit of [illegible].

* * *

1. Early Recognition

It is wise for everyone, and especially those past 35, to keep alert for cancer's danger signals. The American Cancer Society believes that cases of cancer should be found early and treated immediately.

2. Prompt Attention

When any of these warnings appear, prompt medical attention is advisable. The doctor is equipped to make complete examinations. Cancer clinics or by a specialist. It is comforting to know that the majority of these examinations reveal that cancer is not present.

3. Proper Treatment

If cancer is discovered, the specialist will recommend the best treatment—surgery, or radiation. He will point out that potent medicines for cancer and so-called "cancer cures" [illegible] are [illegible] to secure.

These Are Cancer's "Danger Signals"

1. Any lump or thickening especially in the breast, lip or tongue. 2. Any irregular or unexplained bleeding. 3. A sore that does not heal, particularly about the mouth, tongue, or lips. 4. Persistent hoarseness or cough or difficulty in swallowing. 5. Loss of appetite or continued indigestion. 6. Any persistent hoarseness, cough, or difficulty in swallowing. 7. Any persistent change in normal elimination.

Pain is not usually an early symptom of cancer.

Metropolitan Life Insurance Company

1 Madison Ave., New York 10, N. Y.

To learn more about the dangers and the Metropolitan's free booklet, "[illegible] Against Cancer"

TO VETERANS—IF YOU HAVE NATIONAL SERVICE LIFE INSURANCE—KEEP IT!

Branta's born with a bag of tricks

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] the time when your family needs the most protection.

Ask your Travelers agent or broker about the [illegible]

MORAL: INSURE IN

The Travelers

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Prices subject to change without notice

Kodak

is famous for its fine resort hotels—yet it has a special, warm spot in its heart for an old pair of overalls like my mate and me. A man can loaf in Maine. He can wear easy clothes, keep easy hours, live an easy life.

? You mean if I vacation in Maine, I can honestly rest? I don't have to play golf, don't have to dance?

You're darned right! Doing nothing is a wonderful sport here in Maine. That's when you really begin to appreciate the Maine air . . . the aroma of the pines or the spray of the ocean.

? But suppose I get tired of just looking at the mountains and resting by the sea?

Then you can do everything. In Maine, you can take a morning dip in the ocean—then you can drive north a little on first class roads and spend your afternoon riding horseback in the mountains. You can fish, hike, play golf or tennis, sail on the ocean or go canoeing on a lake.

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A visit to Denver [illegible] be considerably refreshed [illegible] eager to [illegible] the rolling rugged mountains and sparkling lakes.

The City of Denver and City of St. Louis carry Pullman and Coach passengers. All Coach seats reserved.

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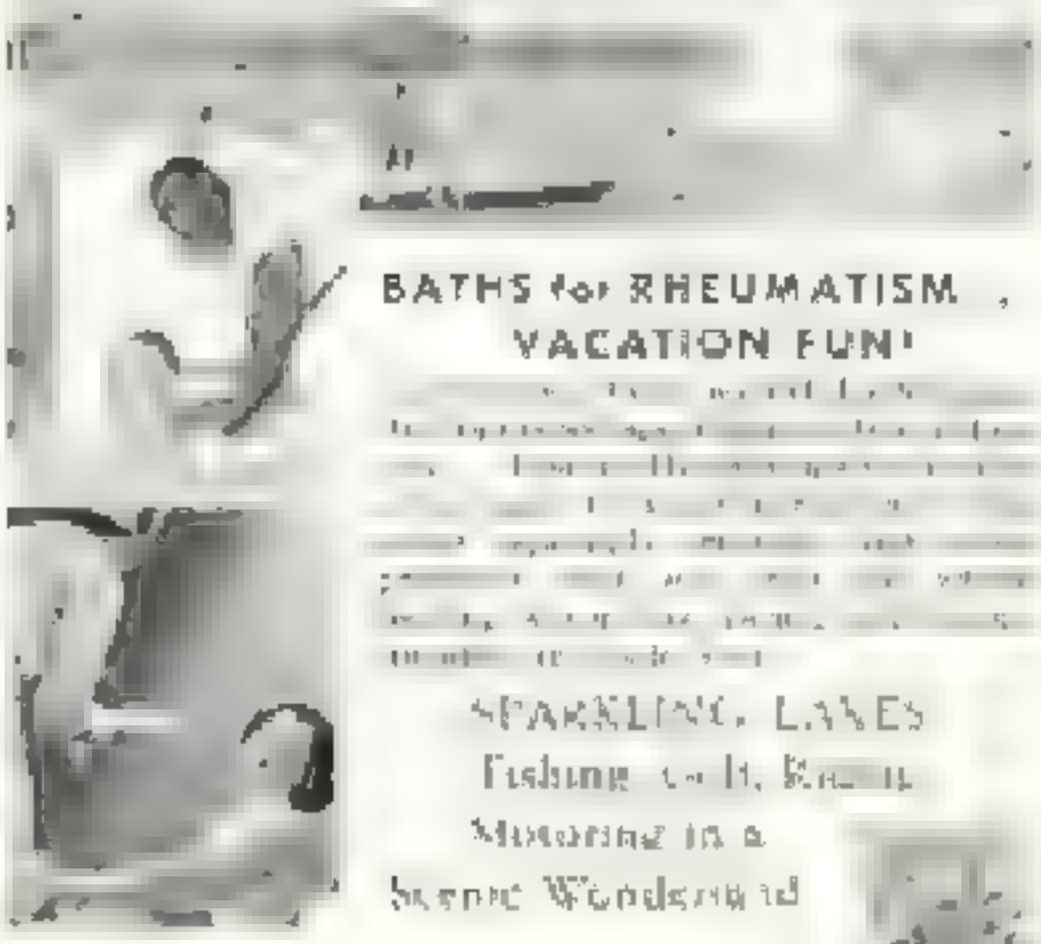

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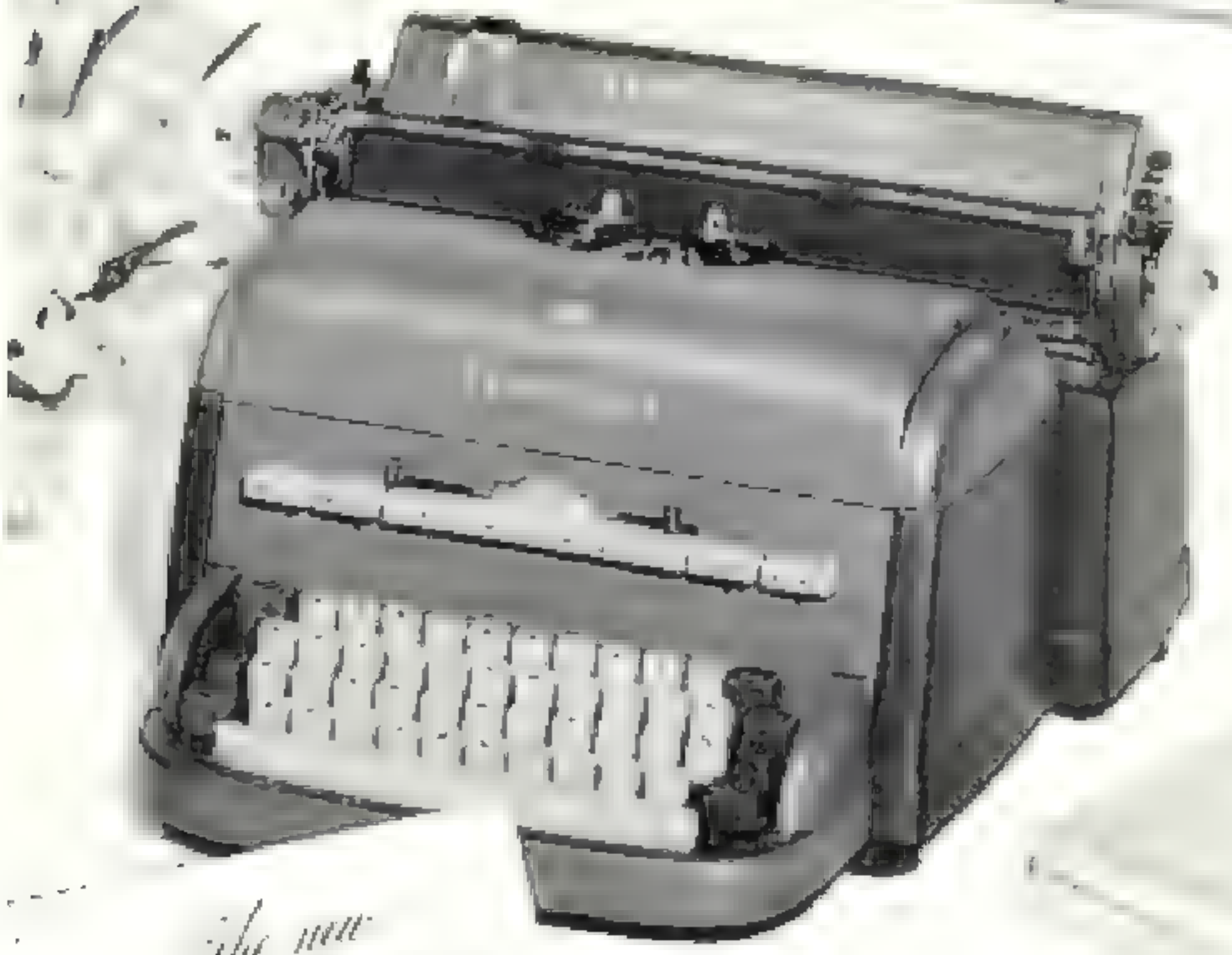

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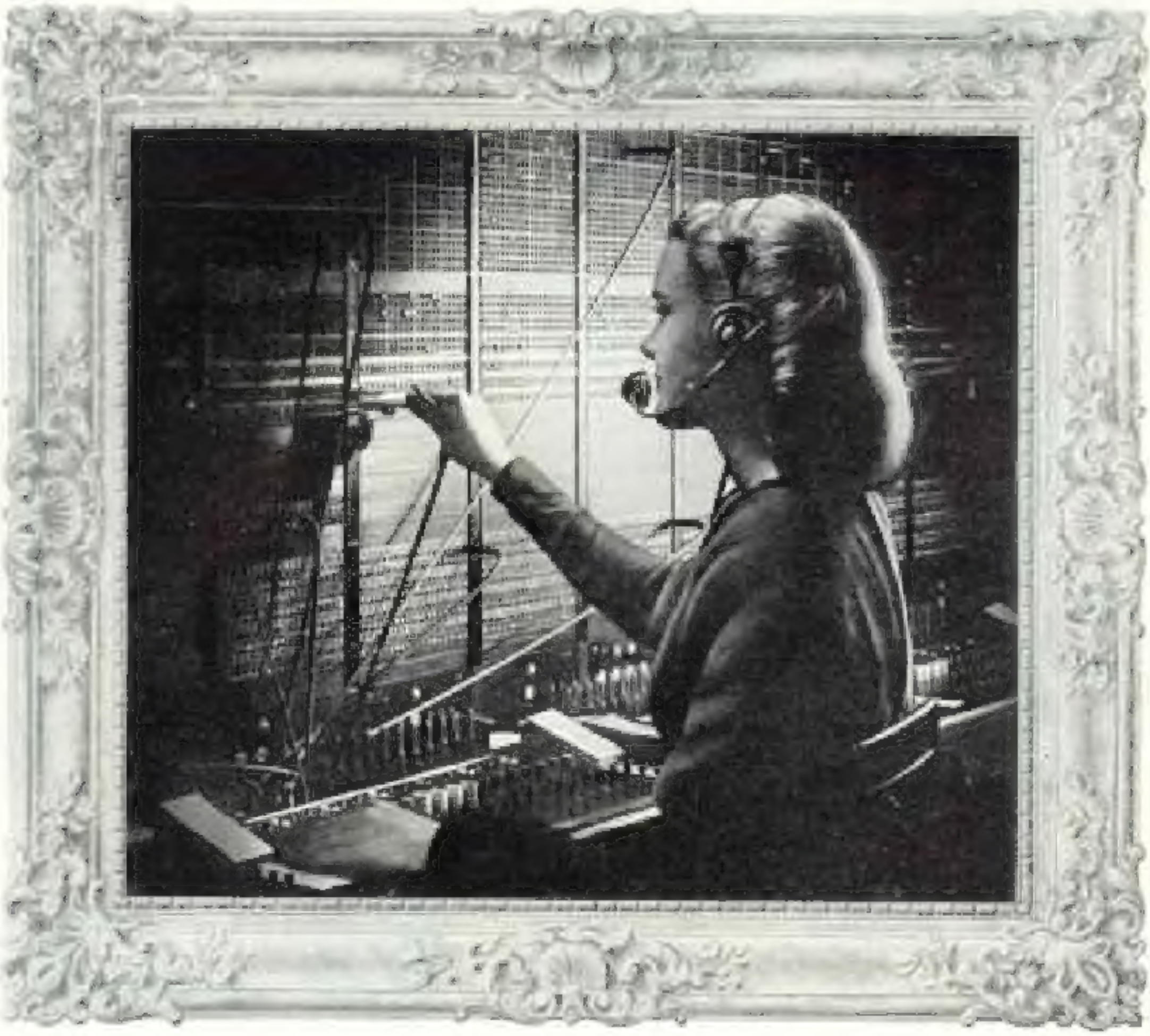

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